HELSINKI SCHOOL OF ECONOMICS
Faculty of International Business

SUCCESSFUL PUBLIC-PRIVATE HEALTH PARTNERSHIPS:

THE ROLE OF PRIVATE SECTOR IN IMPROVING ACCESS TO HEALTH PRODUCTS IN LEAST DEVELOPED COUNTRIES

Master's Thesis
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Abstract

This thesis examines private sector involvement in global public-private health partnerships (PPHPs) that aim to improve access to drugs and vaccines in least developing countries (LDCs). The explosion of HIV pandemics in the 1990s increased awareness on global health inequities and PPHPs were given a pivotal role in overcoming the market and government failure to improve health status of the poor. Despite their popularity, PPHPs still seek their place and mandate in the public health setting.

Considerable scepticism exists about the motives of private firms that engage in partnerships, yet little scientific literature is published on the subject. This paper aims to understand the private sector role in PPHPs and notably why pharmaceuticals join partnerships and take responsibilities that traditionally fall under the liability of public sector. The study provides a thorough overview on PPHP literature and relates to theories on multi-stakeholder alliances. The contributing theories draw from governance, corporate social responsibility and business ethics discussion. On the basis of this multidisciplinary body of theory, a framework was developed to analyse the business sector's role in PPHPs and the empirical data.

A qualitative case study was conducted on Sanofi Pasteur's role in Global Polio Eradication Initiative. GPEI is being considered as the largest global health partnership to date and has successfully reduced the incidence of polio, offering a possibility to identify best practices in the field. The initiative's longest standing corporate partner Sanofi Pasteur is the world's largest vaccine manufacturer. The primary empirical data was collected in 2006 through three expert interviews within the target company in Paris, France. The secondary data was collected from published sources such as journal articles, GPEI's annual reports and industry's responsibility reports.

The results show that Sanofi Pasteur's role in GPEI consists of ensuring the supply of polio vaccines (at cost), offering immunisation expertise pro bono and improving current and new vaccines. The company began collaborating with GPEI for its long experience in polio immunisation. Today the driving values of Sanofi Pasteur lie in the ethical reasoning, social responsibility, future market opportunities, public relations and relationship building.

Key words: public-private partnership, public health, pharmaceutical industry, least developed countries.

Tiivistelmä

Tämä pro gradu –tutkielma tarkastelee yksityisen ja julkisen sektorin kumppanuusohjelmia kohdistuen erityisesti yksityisen sektorin rooliin rokotteiden saatavuuden edistämiseksi kehittyvissä maissa. HIV-pandemian räjähdysmäinen leviäminen 1990-luvulla lisäsi tietoisuutta terveyden epätasaisesta jakaantumisesta maailmassa ja tuolloin kumppanuusohjelmat nostettiin merkittävään rooliin terveyden edistämiseksi. Huolimatta niiden suosiosta, kumppanuusohjelmat hakevat vielä mandaattiaan yksityisten ja valtiollisten kansanterveysalan toimijoiden joukossa.

Yksityissektorin osallistuminen kansanterveyshankkeisiin herättää epäluuloa ja yritysten motiiveja yhteistyöhön on toistaiseksi tutkittu vain vähän. Tämä tutkimus pyrkii selvittämään yksityisen sektorin roolia kumppanuushankkeissa ja erityisesti syitä, miksi lääketeollisuus osallistuu kansanterveyshankkeisiin, jotka perinteisesti kuuluvat julkisen sektorin vastuulle. Tutkimus tarjoaa laajan katsauksen kumppanushankkeisiin liittyvään kirjallisuuteen ja allianssiteorioihin. Tätä työtä tukevat lisäksi hallintotapaa, yritysten yhteiskuntavastuuta ja liike-etiikkaa käsittelevä kirjallisuus. Poikkitieteellisen tutkimusaineiston perusteella kehitettiin teoreettinen viitekehys, jota vasten voidaan analysoida yksityiseen sektoriin kohdistuva empiirinen tutkimus.

Kyseessä on laadullinen tapaustutkimus, jossa analysoidaan rokotevalmistaja Sanofi Pasteurin roolia maailman polion hävittämisohjelmassa. Sanofi Pasteur on polio-ohjelman pitkäaikaisin yritysjäsen. Empiirinen tutkimusaineisto kerättiin vuonna 2006 ranskalaisten asiantuntijahaastattelujen ja sekundaarilähteiden avustuksella. Tieteellisiä julkaisuja ja Maailman terveysjärjestön tuottamia arviointiraportteja analysoitiin yksityisen sektorin kumppanuuden näkökulmasta.

Tulokset osoittivat, että Sanofi Pasteurin rooliin polion hävittämisohjelmassa on kuulunut monipuolisesti rokotesaatavuuden turvaaminen, asiantuntija-avun antaminen ja uusien rokotteiden kehittäminen. Yritys nimeää erilaiset eettiset ja sosiaaliset syyt, sekä markkinatilanteen, PR:n ja yleisen suhdetoiminnan motivaatioksi kumppanuushankkeeseen osallistumiselle.

Avainsanat: yksityisen ja julkisen sektorin kumppanuushankkeet, kansanterveys, lääketeollisuus, kehitysmaat

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1 Introduction

"The United Nations once dealt only with governments. By now we know that peace and prosperity cannot be achieved without partnerships involving governments, international organizations, the business community and civil society. In today's world, we depend on each other."

Kofi Annan, United Nations Secretary-General (1998)

1.1 Public-private partnerships and multilateral governance in health

Unequal distribution of health, particularly efforts to expand access to drugs and vaccines, has become the talk-of-the-day in the global arena of international development. The explosion of HIV pandemics in the 1990s foregrounded the disastrous state of healthcare and lack of drugs in the developing countries waking up the donor community to the global health challenges. Pharmaceutical industry aroused condemnation by declining to heavy price cuts stressing intellectual property rights. To improve the situation, international organisations began encouraging collaboration between public and private actors and academia pushed research on public-private health partnerships (PPHPs). In 2001, regretting their damaged reputation, drug manufacturers increased differential pricing and established special departments to deal with access-to-medicines programs creating strategic alliances with the public sector. A large number of multi-stakeholder initiatives between public and private organisations have since been set off to reduce the high morbidity and mortality levels of low-income populations in developing regions of Africa, Asia, and the Americas. Despite these efforts, United Nations' (2007, 14) estimates for 2005 indicate

that 10.1 million children died before their fifth birthday, mostly from vaccine preventable causes. Global warming is further expected to deteriorate the health situation in developing countries . A lot remains to be done.

The international community stresses that investing in the global health is both a human rights and development imperative. In recent years World Health Organisation has intensified in its work the human rights-based approach highlighting the Universal Declaration of Human Rights' Article 25 (1): "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including... medical care and necessary social services." (WHO 2008b; WHO 2006; United Nations 1948). However, this study emphasises the view that improved access to health alleviates human suffering and is thus, next to clean water, sufficient nutrition and education, a prerequisite to steady development in the combat against poverty. When the United Nations (later UN) in 2000 adopted the Millennium Declaration setting out eight Millennium Development Goals (later MDGs) to be reached by 2015, not surprisingly three of the eight MDGs directly related to the need for a better access to health and most of them have sub-targets that can only be achieved through improved health. This paper touches particularly upon the 8th MDG, which urges to develop partnerships for development and its target 17: "in cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries" (MDG Monitor 2008).

Alas, this all sounds very promising, yet the UN is lagging behind of schedule in achieving the MDGs (UN 2007, 4-5). According to Jeffrey

Sachs, currently the Special Adviser to the UN Secretary-General Ban Ki-moon on the MDGs, trailing behind the goals is due to insufficient financial resources as wealthy governments of the North repeatedly fail to follow through their promises (ECOSOC 2008a). The 22 member countries of the OECD Development Assistance Committee (DAC), the world's major donors, provided US$103.9 billion in international aid in 2006, down by 5.1% from 2005, in constant 2005 dollars (OECD 2007). Finland's development aid followed the trend and fell a drastic 9.9% in 2006 (Ibid). Total development aid of OECD governments came to just 0.3% of countries' combined gross national income (GNI), well below of the 0.7% UN recommendation (Ibid). Aid to sub-Saharan Africa was static in 2006, leaving a challenge to meet the Gleneagles G8 summit commitment to double aid to Africa by 2010 (Ibid).

On the positive side, the non-governmental bodies' international assistance is growing in importance. Contributions from private and civil society actors rose from $11.5 billion in 2005 to $14.6 billion in 2006 (UN 2008). Corporate giving aimed at combating poverty is thus taking its place among the growing component of development assistance complementing aid from OECD countries. Discussions at the Economic and Social Council's special event on corporate philanthropy (UN 2008) hinted that "the impact of private sector involvement could be substantially greater if appropriate tools were found to give greater coherence to the work of the many diverse actors involved". Thus the aim of this research is to contribute to the discussion on private sector's, notably on pharmaceutical industry's involvement in international health. This thesis approaches the matter by presenting the literature on alliances and then, further by exploring alliances between

public and private organisations. Subsequently, the discussion will be narrowed down to partnerships active in the health sector in developing countries. Finally, in the empirical part, a retrospective case study was conducted studying vaccine manufacturer Sanofi Pasteur's role in Global Polio Eradication Initiative.

The health care sector is also one of the primary areas of emphasis of Finland's development policy. Good health is seen important on a personal and humanitarian level, but it is also central to economic activities and economic growth (Ministry for Foreign Affairs, 2007). My personal interest and knowledge on this matter grew during my studies at ESSEC Business School's Health Management Institute in 2005-2006 in France. At the time I was able to visit Novartis Institute for Tropical Diseases in Singapore and gain access to Sanofi-Aventis' Department for Drug Access to conduct interviews. I have also attended several conferences in global health e.g. Harvard University's HPAIR 2005 "Global Health Disparities" in Tokyo and International Federation of Pharmaceuticals IFPMA Assembly 2006 "Working Together for a Healthier World" in Geneva. During my internship at the Finnish Mission to the United Nations at Geneva in autumn 2006 I followed health and humanitarian affairs and attended WHO meetings on various subjects including tropical diseases.

1.2 Research problem

There is a strong global commitment to expand access to health products and eradicate vaccine preventable diseases by establishing joint initiatives between public and private sectors. However, due to problems such as lack

of resources, insufficient infrastructure, bad governance and weak public sector, most developing countries are unable to provide access to basic drugs for their populations. Industry expert Laurie Garrett (2007) confirms in Foreign Policy that more money than ever before is being directed towards public-private health partnerships in LDCs yet she argues that much of the cash is leaking away without result. Simultaneously, the need to demonstrate good corporate citizenship has driven private companies to emphasise their involvement in PPHPs. This thesis aims to analyse the role of private sector in these partnerships. According to the UN Under-Secretary-General for Humanitarian Affairs John Holmes' recent statement (2008), a purely local disaster no longer exists and thus, companies are increasingly realising that in the global economy challenges in developing countries may well have an impact in their key suppliers, clients or own staff, making corporate social responsibility not only a conscience-easing option but a necessity.

1.3 Research questions and objectives

The purpose of this thesis is to answer the following question: *What is the role of private (for-profit) sector partner in public-private health partnerships that target to improve access to health products in least developed countries?*

The question will be approached by answering the following sub-problems:

- How do multi-stakeholder alliances function and what are their success factors and challenges?
- How do public-private health partnerships function: why have they been established, who are the stakeholders and how do they work?

- How can the private sector partners assist in bettering the access to health products and why do private corporations want to partner a public-private health partnership?

Since Milton Friedman's times (Friedman 1970), corporations' objective in market economies has been to maximize performance and shareholder value. Concurrently, public-private partnerships have emerged as the new modus operandi of multilateral governance in health. This paper aims to understand the role of private sector in public-private health partnerships and why pharmaceutical corporations join these partnerships and take responsibilities that traditionally fall under the liability of public not-for profit sector. To enhance the functioning of alliance and contribute to the success of partnership, I further examine what is expected of the private sector partners in PPHPs and what are the success drivers for alliances.

The literature review seeks to develop a theoretical framework that presents the components and processes that drive the forming of public-private health partnerships and the outcome of such an alliance for both public and private sector partners. This master's thesis includes a case study which will be analysed through the developed framework. The objective of this thesis is thus firstly, to determine the role of private sector organisations in PPHPs, and secondly, to give recommendations for pharmaceuticals that plan to take part in public-private health partnerships.

1.4 Scope and limitations of the study

This study views improved health condition as a vehicle to accelerate development and eradicate poverty. The primary objective of this thesis is to study transnational public-private health partnerships aiming to improve access to health in least developed countries (later LDCs). The discussion is limited to equal and universal access to health products, meaning in particular medicines and vaccines. More specifically, private sector involvement will be studied in the context of pharmaceutical manufacturers, which typically represent private sector partners in PPHPs. The literature review approaches this topic by presenting first briefly the discussion on alliances and then, further by exploring alliances between public and private organisations, more commonly called public-private partnerships. The discussion on strategic alliances refers to research that was mainly conducted in corporate setting. The context of this thesis being management sciences and economics, this limitation can be legitimated. Subsequently, the discussion will be narrowed down to partnerships active in the health care sector in developing countries. The scientific discussion on health partnerships focuses currently specifically on initiatives that target to foster research and development for neglected diseases. The subject of this study being access to (already existing) health care tools, the literature was little less abundant.

1.5 Structure of the study

This paper first introduces the global health landscape and current discussion on public-private health partnerships. Then, the research objectives and setting for this master's thesis will be presented and further,

the theoretical research methodology of the literature review described. The literature review in section 2 begins with the scientific discussion on strategic alliances and chapter 2.1 examines multi-stakeholder partnerships and their success factors. Next, chapter 2.2 reviews the public-private health partnerships as a new, innovative mode of multilateral governance discussing why and how they were developed, who the main stakeholders in such alliances are and how PPHPs are being organised. Chapter 2.3 further views the private sector's role in PPHPs defining the expectations and motives for the private sector partner. Section 3 exhibits the theoretical framework and factors influencing PPHPs that target to improve access to health products in least developed countries. Then, section 4 shows and evaluates the empirical research methodology. Section 5 concentrates on empirical discussion, presenting first the case of Global Polio Eradication Initiative and its major corporate partner Sanofi Pasteur. Finally section 6 summarises the study and brings the paper to a close with conclusion.

1.6 Terminology

Equal and universal access to health – Universal and equal health care means a health system that is extended to cover all health needs of a given population in equal manner regardless of their ability to pay. The concept of health care comprises of prevention, treatment, and management of illness and the preservation of mental and physical well-being. However, in this study "access to health" refers to equal and universal access to health products, meaning in particular medicines and vaccines.

Intellectual Property Rights (IPR) – Intellectual property refers to creations of the mind, be it of industrial property such as inventions (patents) and trademarks or copyright, which includes literary and artistic works (WIPO 2008). In the context of health, IPR and more specifically, IP protection has a great importance in pharmaceutical industry's ability to develop, license and sell patented pharmaceutical products to developing countries.

Least Developed Countries (LDC) – UN-based term is a category of highly disadvantaged low-income nations whose GNI per capita is below $900. Currently 50 countries fall under the official LDC classification. This study uses the term in a loser sense including large nations with very disadvantaged regions such as India, China into the group. The LDCs are considered to be in need of the highest degree of attention and are given special concessions and priority technical assistance in international cooperation to reduce the competitive disadvantages they suffer from in the global economy. (UNCTAD 2008)

Private Sector – For-profit actors such as private and public corporations. In this research, pharmaceutical sector will solely represent the private sector.

Public-Private Health Partnerships (PPHPs) – Alliances, which involve at least one private for-profit organization with at least one not-for-profit organization. The core partners provide a joint sharing of efforts and of benefits and make a commitment to the creation of social value (improved health), especially for disadvantaged populations (Reich 2000, 618). Literature also recognises synonymous terms *global public-private partnerships (GPPPs)*, *Public Social Private Partnerships (PSPP)*, *social*

partnerships and public-private networks. To make a clear distinction between all public-private ventures and those in the health sector, a concept of PPHP was developed and will be further used in this research.

Public Sector – All not-for profit actors at large, including governmental and intergovernmental bodies, private foundations and non-governmental organisations (NGOs). Some literature uses terms not-for profits (NFPs) for public sector partners and civil society organisations (CSOs) for private foundations and non-governmental development organizations (NGDOs) for NGOs. Finally, the three separate semantic interpretations of the term "public" must be noted to avoid confusion: government ownership, widespread ownership and open, often, free access (Savas 2000, 4). For example, the government's (public sector's) involvement is not necessary to attain widespread (public) benefits for populations.

1.7 Methodology of the literature review

This thesis seeks in-depth understanding of the behaviour of private sector partners in public-private health partnerships in bettering access to health products in least developed countries. The sub-problems aim to identify how multi-stakeholder partnerships and public-private health partnerships function. Further, I ask how the private sector partner can assist in bettering the access to health products and why do corporations want to partner health partnerships. In regards to these research questions, secondary data supported the information collection for the theoretical literature review. Further, a qualitative empirical study was conducted in the context of Global Polio Eradication Initiative, studying the private sector partner, vaccine

manufacturer Sanofi Pasteur's role in the initiative. The empirical research methodology will be presented and discussed in chapter 4, following the literature review.

The data for literature review was gathered from secondary sources such as published academic journal articles and books paying special attention on the quality of the journal and the article's citations to ensure high standard setting for the discussion. The mostly used journal sources were Strategic Management Journal, Harvard Business Review, Business Ethics Quarterly, Foreign Affairs, American Journal of Public Health and Health Affairs. The global and intergovernmental nature of global health partnerships required studying reports, publications, statistics and other documentation produced by multilateral organisations such as United Nations, World Health Organisation and OECD. Additionally, a few newspaper articles, mostly from the Financial Times, were referred to in order to bring recent views to the literature review. Further, having attended conferences on international health and humanitarian affairs, I used speeches addressed by the representatives of Finnish Ministry for Foreign Affairs and United Nations in the discussion. Majority of the sources were written by American scholars, without any intentional emphasis. As global health is increasingly being financed by US-based private organisations, scholar grants in the field might be more easily available for transatlantic academics. Nevertheless, Geneva in Switzerland remains to be the global centre for health and humanitarian affairs. To continue, due to the newness and narrowness of the research subject, very little Finnish research exists in the field. However, in the area of strategic alliances and internationalisation, I was happy to discuss Helsinki School of Economics' own professors Hannu Seristö's and Reijo

Luostarinen's prominent studies. Further, scientific management literature discusses public-private partnerships in the context of strategic alliances, which frames, respectively, this paper.

The data collection was influenced by the multi-disciplinary nature of the research subject and thus, the literature contains journals, working papers, books, reports and other papers from management sciences, political and social sciences and public health literature. The library of Helsinki School of Economics, National Library of Health Sciences and Arts Faculty Library at the University of Helsinki provided most of the needed literature. Having taken from the beginning a multi-disciplinary approach to the research subject, I was looking forward to learning on the theoretical constructions outside of my own discipline of economics. In the analysis, my intension was to look at this qualitative phenomenon of public-private health partnerships from multiple positions in an objective and independent manner and to further bring in critical analysis. I sought to remain sensitive to the biases, personal opinions and interests of authors in order to treat the research questions with objectivity. To conclude, the literature on health partnerships commonly studies the phenomena through small, focused samples (see for example Curtis et al. 2007; Garrett 2007; Lucas 2002, Muraskin 2002). Thus, some examples have also been briefly mentioned in the literature review in order to concretise the theoretical discussion.

2 Literature review

2.1 Multistakeholder alliances

This thesis discusses public-private health partnerships (PPHPs), the organisations of organisations that come together to collaborate for mutual benefit and further, in this chapter I aim to answer the question on how do the multistakeholder alliances function. In 2000, Harvard professor Michael R. Reich (618) wrote how partnerships can have positive and innovative consequences for well-defined public health goals, and they can create powerful mechanisms for addressing difficult problems by leveraging the ideas, resources and expertise of different partners. Yet he stated how little we know about the conditions when the collaborations succeed as the rules of the game for PPHPs are fluid and ambiguous, and constructing an effective partnership requires substantial effort and risk. Thus, this thesis will commence by looking into the scientific discussion on multi-stakeholder alliances and seeking to identify what are the success factors for these partnerships.

2.1.1 Alliances, partnerships and other forms of collaboration

Transnational actors, alliances and networks have been on the rise in the years since the World War II, a trend further reinforced by democratization, European integration and the information revolution of the 1990s and (Keohane and Nye 1976, 398; Luostarinen and Welch 1990, 193; Mintzberg, Ahlstrand and Lampel 2005, 256). Kenichi Ohmae, a revered strategist, has even gone so far as saying: "Globalisation mandates alliances, makes them absolutely essential to strategy" (1989, 148). According Kanter (1994, 96)

the ability to form and sustain fruitful business alliances has become a key corporate asset that she calls collaborative advantage. Moreover, the complex reality of alliances and alliance networks increasingly dissolves boundaries of organisations making it difficult for managers to separate one's competition of allies as different collaboration forms replace rigid hierarchies on the inside and open markets on their outside (Doz and Hamel, 1998, XIV; Mintzberg, Ahlstrand and Lampel 2005, 258). Practically all Global 500 companies engage in partnerships and some of the most rapidly growing forms of international strategies are those involving strategic alliances between companies (Stahl and Grigsby 1997, 76). Yet, this trend is not solely limited in corporate setting. Collaboration between non-profit organisations and corporations are equally growing in frequency and strategic importance and further, increasingly migrating from the traditionally philanthropic relationship, characterised by benevolent donor and grateful recipient, toward deeper, strategic alliances (Austin 2000, 1).

Despite the growth in the number of alliances, they have shown to be unstable and suffer from a high failure rate (Gulati 1998, 307-309; Seristö 2000, 1; Lunnan and Haugland 2008, 545). To give an example, numerous global network alliances were created a few years back to provide global services to multinational corporations (Ulset 2008, 267). These alliances have been criticised for their complexity, inefficiently designed and badly governed organisation structure and replaced by market contracting and integrated firms (Ibid). Another recent study (Lunnan and Haugland 2008, 552-553) indicates that strategically important and long-standing alliances have higher survival rates than newly established minor partnerships. Next to alliance failure, research identifies other possible threats for stakeholders

such as loss of autonomy, information asymmetry and increasing complexity (Mohr and Spekman 1994, 135). One partner may take more than it gives and emerge later as a direct competitor. Also, next to shared costs and risks, there is the downside of having to share the profits form the alliance as well. The success factors for alliances will be discussed in chapter 2.1.3.

Alliances are being studied from multiple perspectives and a wealthy theoretical and empirical literature exists from organisation theories, networks, contractual relationships and procurement to public policy and governance. Further, depending on the context alliances take many names and thus, this study refers bundles different collaborative formations under a common term alliances. Strategic management literature refers to strategic alliances, which Gulati (1998, 293) defines the term as "voluntary arrangements between firms involving exchange, sharing, or co-development of products, technologies, or services". Another noticeable concept of alliances is public-private partnerships, or social partnerships, referring to collaboration between private actors and public not-for-profit organisations (Reich 2000, 618). The chapter 2.2 is dedicated to detailed discussion on public-private partnerships.

2.1.2 Drivers for alliance formation

Partnerships are principally created to gain competitive advantage in the markets (Mohr and Spekman 1994, 135). Cross-sector cooperation can be seen as an instrument for companies to overcome organisational barriers and to reach goals that would solely be unattainable. Typically organisations seek in alliances access to knowledge, new markets, resources or wider

product range, answer to a competitive thread of a common competitor, decreasing transaction costs and sharing of costs of joint R&D, production or risk of large-scale projects (Mohr and Spekman 1994, 135-136; Stahl and Grigsby 1997, 77; Gulati 1998, 298). The benefit of an alliance structure is that since companies remain separate and independent, there is only a little administrative and coordination costs involved next to shared risks (Wright, Kroll and Parnell 1998, 102). Thus, strategic alliances can be undertaken for economical, political, technological or social reasons (when considering the social network theory, see e.g. Gulati 1998).

In the strategic management literature alliances are being discussed in the context of internationalisation and growth strategies. Strategic alliances offer an option for corporate-level growth, next to mergers and acquisitions, organic growth, horizontal or vertical integration and diversification to related or unrelated industries (Wright, Kroll and Parnell 1998, 89-102). Seristö (2000, 13) specifies that alliances provide organisations more flexibility than mergers and acquisitions (M&A), require less capital, and may carry fewer risks than M&As. However, with the rapid increase in alliances of different kinds, strategy creation has become more a joint process, to be formed with partners (Mintzberg, Ahlstrand and Lampel 2005, 255). Astley (1984, 533) criticised heavily the warlike, win-lose, view on business and went further claiming that as interdependency between organisations has increased, collaboration has come to dominate the strategy formation over competition. Hamel, Doz and Prahalad (1989, 133-134) take an opposite position and view alliances as a form of competition with the win-lose mentality indeed. However, they consider mutual gain possible when neither of the stakeholders invades other's market, in other words

when "strategic goals converge while their competitive goals diverge", the size and market power of both partners is modest compared with industry leaders or the partners believe they can learn from others and concurrently limit access to proprietary skills (Ibid, 134-135).

When the inter-firm cooperation has been treated as an internationalisation strategy and driven by international market access, it has given rise to trade between developed Northern country firms and firms in developing countries as well as between market economy and socialist firms (Luostarinen and Welch 1990, 190-191). However, one should distinguish international alliances from clean trading outward and inward operations modes where one side can be clearly identified as a seller and the other as a buyer (Ibid, 192-194). Nevertheless, international strategic alliances can take a number of forms including collaborations without equity (such as long-term contracting, licensing, franchising and turnkey arrangements), cash-neutral exchange of assets, equity ownership agreements and joint ventures (Stahl and Grigsby 1997, 76). But when Doz and Hamel (1998, XV) compared international strategic alliances to joint ventures they concluded that alliances are characterised by greater uncertainty and ambiguity, the partner relationship evolves in an unpredictable way as partners may later become competitors, dynamic management of alliance over time is more important than the initial setting and the adaptability of business model to change determines its success. Further, Luostarinen and Welch (1990, 196-202) have well divided the international collaborative agreements into four groups: 1) research and development cooperation (including joint product/process/technology projects, exchange of know-how and mixed equity venture), 2) commercial cooperation (including sales, marketing,

product and logistics cooperation next to joint procurement and purchasing), 3) industrial manufacturing and production cooperation (including co-production, production specialisation, cross-licensing, joint operations for large industrial turnkey projects and mixed equity ventures), 4) managerial cooperation (including development of joint managerial systems, tools and knowledge, joint training programmes and management of international project operations).

On the negative side, multinationals, in particular those attempting to enter emerging markets and developing countries may be obliged to form an alliance with a local partner due to pressures from host government (Baughn et al 1997, 109). In view of the fact that most governments recognise the value of intellectual capital for their national economic growth and development, it is difficult to isolate the real objectives of an alliance partner who has governmental support (Ibid). Stahl and Grigsby (1997, 77-78) further warn that many international strategic alliances have suffered from cultural challenges and the disappointment of failed objectives. As considerable differences in organisations' sizes often have an impact in the alliance's power distribution and might lead to exhaustion of smaller partner's resources (Baughn et al. 1997, 109), local partners equally tend to dominate foreign partners, despite the actual equity stakes in the alliance (Stahl and Grigsby 1997, 78). To conclude, prior to engaging in a partnership, there is a clear need to identify the underlying motives and objectives of both parties for cooperation. Next, the discussion will be directed towards the antecedents of successful partnerships.

2.1.3 Success factors for alliances

Success of a partnership can be assessed by numerous ways according to the nature of alliance. This study adopts Mohr and Spekman's (1994, 136) view that the attainment of partnership objectives (objective indicator) and the satisfaction of one party with the other (affective measure) are suitable indicators of collaboration's success. An alliance that creates satisfaction exists when performance goals have been achieved (Ibid). To continue, Mohr's and Spekman's studies offer insight into how to better manage partnerships to ensure success, as presented in the following Figure 1.

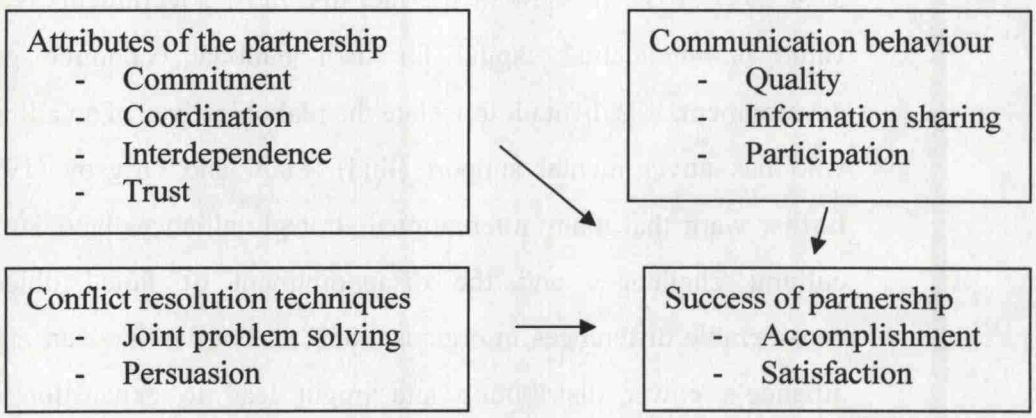


FIGURE 1: FACTORS ASSOCIATED WITH PARTNERSHIP SUCCESS

Source: Mohr and Spekman 1994, 136-139.

Mohr's and Spekman's (1994, 137-139) antecedents for alliance success are three-fold. Firstly, they agree that successful alliances have in common the

following features, so-called attributes of the partnership: high level of commitment on the cooperative relationship, strong coordination of actions directed at mutual objectives (bringing stability to the partnership), understanding that the interdependent working relation provides greater benefits than stakeholders could attain singly and trust on other parties even under a risk (enabling higher adaptability and stress management). Alliance literature in general highlights trust as a critical factor in partnership management (Inkpen and Currall 1998, 1-20). Secondly, most aspects of organisational functioning of partnerships are being influenced by communication behaviour including the quality of communication referring to its timeliness, accuracy and relevance, extent of information sharing and participation in planning and goal setting. Thirdly, given that a certain amount of disagreement is expected in a interdependent business relation, Mohr and Spekman's studies stress constructive management of these conflicts. More successful alliances adopt conflict resolution techniques such as joint problem solving to enable a mutually satisfactory solution and persuasion over domination and third party arbitration.

Reading further the theoretical discussion on how to create and sustain fruitful partnerships, it is argued that successful alliances manage the relationship, not only the immediate deal (Kanter 1994, 97). However, as stated above, even the most flourishing cooperative agreements confront challenges. James E. Austin's research (2000a) on strategic alliances between non-profits and businesses shows these challenges can be surmounted by accommodating "the seven C's of strategic collaboration" as presented in the Figure 2.

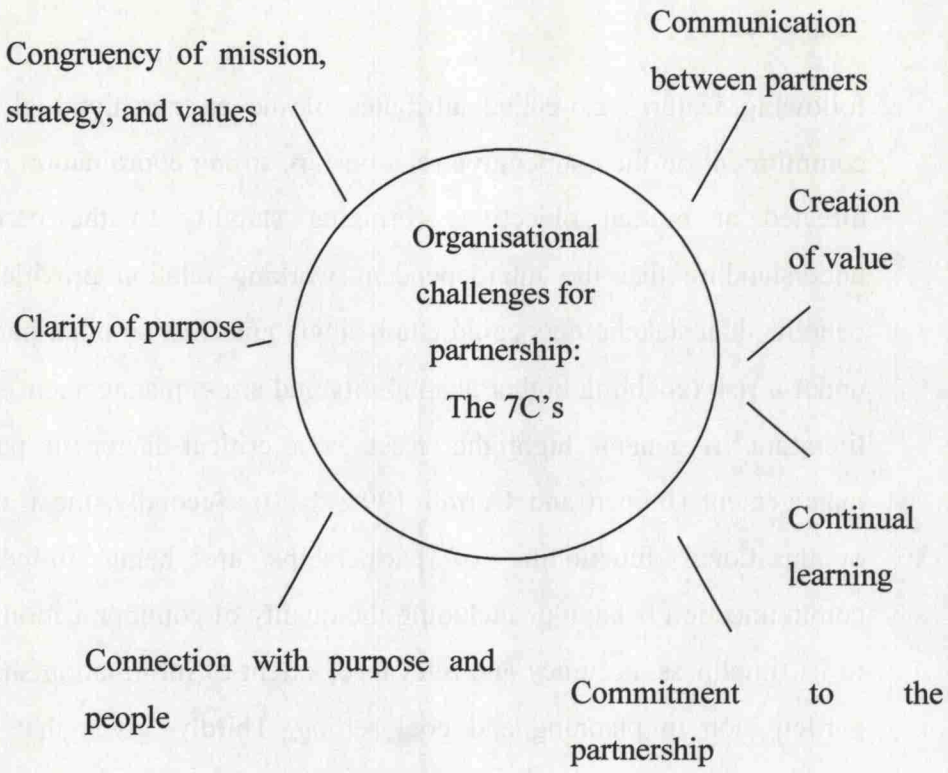


FIGURE 2: CHALLENGES FOR PARTNERSHIPS: THE 7 C'S

Source: Austin 2000a, 173-185.

Constructing sustainable collaboration requires developing a relationship that creates value for all parties and in the case of a PPP, the value created must also be useful to society (Austin 2000a, 173-185). In other words, for collaboration to succeed, each partner must contribute something distinctive for example basic research, product development skills, manufacturing capacity or access to distribution (Hamel, Doz and Prahalad 1989, 133-134). The challenge is to share enough skills to create advantage versus companies outside the alliance while limiting the transparency of their operations and

transfer of core skills to the partner (Ibid). Successful companies communicate to employees what skills and information is off-limits to the partner and monitors what the partner requests and receives (Ibid). The alliance should be viewed as a long-term, committed relationship engaging people and involving continuous learning (Austin 2000a, 173-185). The literature finds learning from partners paramount. Successful companies use alliances to build skills and distribute new knowledge (Hamel, Doz and Prahalad 1989, 133-134). Ensuring that all parties have a clear understanding of alliance's purpose can save the collaboration from a failure (Austin 2000a, 173-185). Successful companies enter alliances with clear targets and understanding of their partners' objectives (Hamel, Doz and Prahalad 1989, 133-134). Further, choosing the right partner is critical as a strong congruence between the mission, values and strategy of both partners improves the probability of alliance success (Austin 2000a, 173-185; Shah and Vanitha 2008, 471). Nevertheless, partner organisations need not have a total fit but ensure enough of match to render collaborations mutually beneficial (Austin, Reficco and Herrero 2004, 2-4).

Kanter's (1994, 100) list on attributes of effective inter-company relationships adds, to Austin's (2000a) and Mohr and Spekman's (1994) studies, the individual excellence, investment, institutionalisation and integrity. The motives of entering into a partnership should be positive and future-oriented. Kanter suggests the stakeholders invest in each other to show tangible signs of commitment by devoting financial resources to the collaboration. The relationship is institutionalised as well as given a formal status and the partners show integrity behaving mutually respectfully by not abusing gained information. Interestingly, Hamel, Doz and Prahalad (1989,

133-134) have argued almost the opposite by stating that harmony is not a measure of success and occasional conflict may be an evidence of mutually beneficial cooperation as a partner may be content even as it unknowingly gives out core skills.

Literature on alliance success drivers stresses developing and maintaining effective communication between all stakeholders (Austin 2000a, 173-185; Kanter 1994, 100; Mohr and Spekman's 1994, 138-139). Simonin (1999, 603) confirms that organisational and cultural distance, corresponding to the degree of dissimilarity between the collaborators' organisational culture and business practices, impacts the alliance's success or failure. To continue, Mosakowski (1997, 422) argues that multiple, varying organisational cultures, when brought together in a partnership, may result in increased levels of uncertainty for each partner. This is important to note concerning this study as traditionally in the context of public-private partnerships, both sectors have viewed each other with suspicion and confrontation developing their joint initiatives slowly and cautiously (Lucas 2002, 19). Next this thesis will move further to discuss successful public-private health partnerships.

2.2 Principles on public-private health partnerships

During the 1990s, public-private health partnerships have evolved into a very popular means of addressing a number of serious diseases in the developing world (Barr 2007, 24). In this chapter, I present the literature on global health alliances and aim to describe how these partnerships function; why they have been established and who are the multiple stakeholders.

2.2.1 Concept of public-private partnership

The term "public-private partnership" is defined as any arrangement between a government and the private sector, for-profit or non-profit, in which traditionally public activities are performed by the private sector (Savas 2000, 4). It is being defined as a complex relationship involving at least one government unit and a consortium of private actors (Ibid). Increasingly, it is being noted that functions that might have been seen as evidently the government's domain, such as public education or safety, also demand attention from the business and non-profit sectors (Austin 2000b, 44). Public-private partnerships are thus being applied to variety of fields from providing public transportation services to building large infrastructure projects and organising provisional services in transitional economies. Furthermore, as PPPs are being regarded as a cost-efficient and effective instrument for the implementation of public policy, they have also become a frequently used approach in the provision of health care. Where government or market fails to organise sufficient health services, public-private health partnerships are being established to tackle the challenges (Buse and Walt 2000, 549). Austin (2000b, 44) has predicted that "cross-sector partnering between business, government, and nonprofits will be the collaboration paradigm of the 21st century".

The reasons for the rise of public-private alliances lie in the 20th century's civil society emancipation, public sector failures, corporate scandals, information technology revolution and globalisation enhancing the deepening interconnectedness and interdependence of the world. In other

words, the transformation of central-local government and changing state-private sector relationships have further given rise to the fragmentation of publicly funded organisations and issues governments must now deal with (McQuaid 2000, 10). However, there is no universal understanding of what exactly represent the public or the private actors as private foundations and non-governmental organisations in particular operate at the interface of state, market and civil society and may take different roles (Barr 2007, 22). The below Figure 3 models separate institutions of public-private partnerships and highlights the confusing notions of public and private.

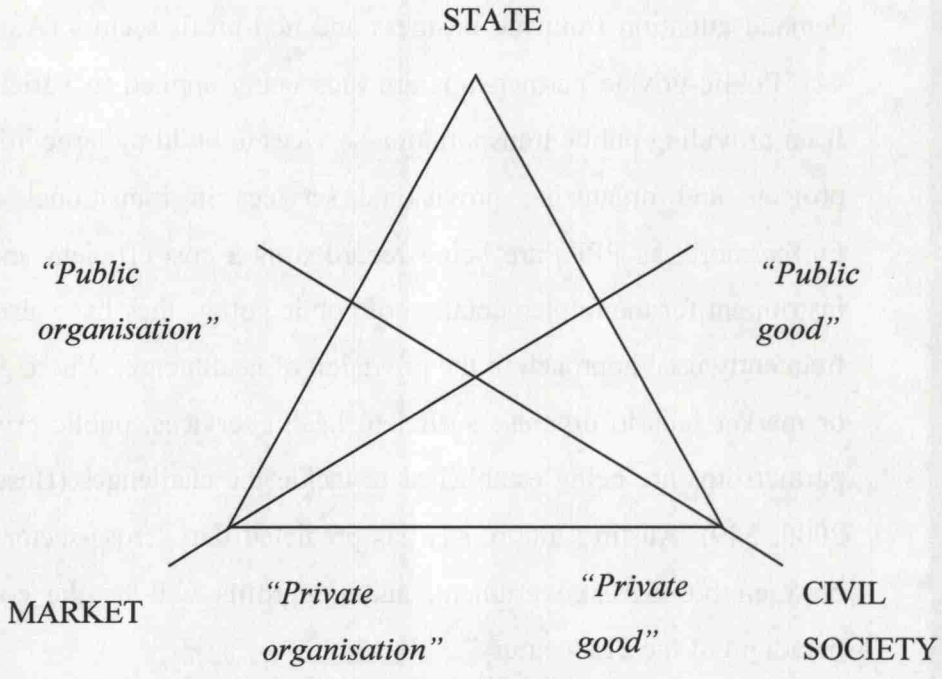


FIGURE 3: THE SOCIETAL TRIANGLE AND PUBLIC-PRIVATE INTERFACES.

Source: Tulder and Zwart 2006, 20-21.

By highlighting both the public and private sectors' role, PPPs have increasingly come to replace the synonymous, yet more controversial term of privatisation (Savas 2000, 3-4). Privatisation can be defined broadly as "an act on reducing the role of government or increasing the role of the other institutions of society in producing goods and services and in owning property" (Ibid, 3-4). As a concept it is often associated with United Kingdom's public policy and the 1979 conservative government of Margaret Thatcher who, concerned about the level of public debt, sought to move activities from the public to the private sector (Spackman 2002, 284). Privately-financed capital expenditure represented in 2002 about 15% of Great Britain's state budget, the National Health Service (NHS), UK's public health insurance, being one of the largest out-sourcing unit (Ibid, 285-286). Privatisation has been seen as an essential tool to implement social policies and by imposing market incentives on public sector managers and encouraging private investment in infrastructure, the government has sought to increase efficiency and remedy a lack of dynamism in traditional public service delivery (Ibid). However, the effect on the public accounts has been largely illusory (Ibid). Privatisation and public-private partnerships both reflect market principles, market forces and competition as well as aim to improve productivity of public management (Savas 2000, 6). Savas (2000, 4) further argues that privatisation is often misinterpreted as a simplistic elimination of public sector menacing democracy and the welfare state, however, he takes rather positive stand on privatisation and thus, lacks at times objectivity in his analysis. The Figure 4 summarises the reasoning and objectives that are being sought through public-private ventures.

INFLUENCE	EFFECT	REASONING
Pragmatic	Better government	Prudent privatisation leads to more cost-effective public services.
Economic	Less dependence on government	Growing affluence allows people to provide for themselves, making them receptive to privatisation.
Ideological	Less government	Government is too powerful and intrusive in people's lives and thus a danger to democracy. Government's political decisions are less reliable than free-market decisions. Privatisation reduces government's role.
Commercial	More business opportunities	Government spending is a large part of economy; more should be directed to private firms. State-owned assets can be better used by private sector.
Populist	Better society	People should have more choice in public services. They should be empowered to address common needs and establish a sense of community relying less on bureaucracy and more on voluntary associations.

FIGURE 4: MAJOR INFLUENCES PROMOTING PRIVATISATION

Source: Savas 2000, 6

This thesis however, focuses on globally operating health PPPs. United Nations has taken a very positive stand and encourages the creation of public-private partnerships for development but there is still continued confusion within the World Health Organisation (MDG Monitor 2008; Barr 2007, 24). Referring to the above discussion on the synonymous use of privatisation and PPPs, WHO has explicitly made an announcement stating that "public-private partnerships for health should be distinguished from

privatization" in order to calm the resistance on health partnerships (WHO 2008c). This discussion will continue in the next chapter as after having introduced the concept of public-private partnerships, this paper moves further to discuss these collaborative efforts in the health care sector.

2.2.2 The rise of public-private health partnerships

Traditional public health groups are confronted by limited financial resources, complex social and behavioural problems and rapid disease transmission across national boundaries (Reich 2000, 617). Concurrently, business sector has come to understand the importance of public health goals for their immediate and long-term objectives, and to accept a broader view of social responsibility as part of the corporate mandate (Ibid). The international community woke up to the global health disparities at the introduction of anti-retroviral medicines for HIV infection in the late 1990's. At the time the therapy was priced at $14.000/year/person leaving patients in countries with the heaviest disease burden without access to the treatment (Garrett 2007, 17). At 2000 AIDS Conference in Durban, South Africa, a group of local HIV positive patients called for the first time for universal access to anti-virals. After four Security Council meetings devoted to the pandemic, United Nations Secretary-General Kofi Annan committed himself personally to establish a global fund to fight Aids, tuberculosis and malaria (Rivière 2001). In 1999 disputes occurred between the pharmaceutical industry, the US Administration and South Africa, whose government claimed right to license local manufacturers to make anti-HIV/AIDS medicines unless the major drug companies voluntarily reduced their prices (Buse and Walt 2000, 556). South African government got sued by

pharmaceutical industry for patent infringement and breach of the WTO's TRIPS agreement (trade-related aspects of intellectual property rights) (Rivière 2001). However, this widely followed Pretoria trial terminated surprisingly in 2001 as pharmaceutical companies decided to drop their proceedings (Ibid). Scared for their damaged reputation, the industry increased their drug donation programs and price cuts. Laboratories established separate departments to deal with access-to-medicines programs. Simultaneously, a group of researchers and international experts gathered around economist Jeffrey Sachs at Harvard University innovating a WHO-driven "3 by 5" public-private partnership that was to provide anti-AIDS drugs to three million Africans by 2005 (Garrett 2007, 17-19). The following year, 2002 World Summit on Sustainable Development in Johannesburg took an active role in encouraging the creation of PPPs to advance sustainable development. Some 230 public-private partnerships were adopted as an official outcome of the Summit and emerged as the new modus operandi of multilateral governance in health (Andonova and Levy 2005, 21-23).

These public-private health partnerships (PPHPs), which can be called social partnerships, community PPPs or inter-sectoral partnerships, are predominantly concerned with research, global coordination and finance mechanisms, access to drugs and vaccines, health system strengthening, public education (Widdus 2005, 5). They are being defined as alliances, which involve at least one private for-profit organisation with at least one not-for-profit organisation (Reich 2000, 618). The core partners then provide a joint sharing of efforts and benefits and make a commitment to the creation of social value (improved health) especially for disadvantaged

populations (Ibid). Further, there are a few international actors that influence the current public health partnership landscape above others. These organisations include Bill and Melinda Gates Foundation (BMGF), The Global Fund, the Global Alliance for Vaccines and Immunization (GAVI) and World Health Organisation (WHO). They often serve as research subjects in the PPHP literature. These organisations are also interlinked as GAVI is for instance financed per 31% (USD 1 billion) by the BMGF, which thus has a permanent seat in its supervisory board (GAVI 2008) and elsewhere, WHO provides administrative services for The Global Fund (The Global Fund 2008). The discussion on various stakeholders of health partnerships will be continued in chapter 2.2.5.

Another reason for the increased awareness on global health inequities is due to political powermen like Bill Clinton, Tony Blair and Kofi Annan, visionary intellectuals such as Klaus Schwab of World Economic Forum, wealthy philanthropists such as Ted Turner, Bill Gates, Warren Buffett and George Soros, industry leaders like Daniel Vasella of Novartis and superstars like Angelina Jolie, Bono, Bob Geldof and Madonna, who have acted as inspirational spokespeople and change drivers for health partnerships. Bill Gates has spoken endlessly about how shocked he was to discover in the late 1990s how millions of children in poor countries were dying from diseases that could have been made harmless for under a dollar (Gates 2007). He had assumed that if these children could be saved, the world would make it a priority to discover and give access to drugs to save them (Ibid). "If you believe that every life has equal value, it's revolting to learn that some lives are seen as worth saving and others are not" (Ibid). Well-known public figures are able to provide invaluable visibility for social

causes, however, there is also resistance to so-called superstar politics, despised for their opportunistic attitude, media domination and intimidatingly high power (Yrjölä 2007a-b). The criticism is not without rationale. Uneven distribution of health is indeed accentuated by irregular government support and private donations (Mikkola 2007). Sustainability and predictability of funding suffers as private donors are particularly sensitive to publicity (Ibid). Thus, more visible initiatives, so-called "donor darlings" draw funding from other less visible but equally important causes, increasing competition and decreasing the over-all efficacy of partnerships. Celebrities' power in development questions has however been recognised for long and UN agencies are getting more fluent in using public figures to reach their goals, for example through UN Goodwill Ambassador program.

2.2.3 Consequences for health equity and global governance

The rapid development of global health partnerships has also awakened the interest of academia, and publications in the area soar. PPHPs are being studied from multiple perspectives and offer an almost endless supply for research purposes. Health partnerships are commonly driven by the aim of sustaining and promoting equitable access to health care. According to World Health Organisation's definition "equity is the absence of avoidable or remediable differences among populations; thus, health inequities involve more than inequality" (WHO 2008b). However, experts in the distribution of health continue to disagree on this definition and a vast literature on the notion of equity of access exists (Oliver and Mossialos 2004, 655). Nevertheless, international health continues to be evaluated on the basis of equal access to health and for example BMFG, the world's largest charitable

funding entity in access to health partnerships, in particular targets to reduce global inequities (BMGF 2008).

Traditionally the classic multilateral, governmental organisations such as United Nations' (UN) institutions have equated with the international organisations. However, other global regulatory apparatuses of civil society have been established over the recent decades, partly because the traditional governmental institutions have not been able to answer the needs of rapid globalisation (Scholte 2007, 308). Simultaneously, the number of international NGOs has skyrocketed from 2800 in 1974, to 16100 in 1991 and further to 20900 in 2004 (Yearbook of International Organizations 2008a-b). To substantiate the growth in civil society, one can elicit the increased employment in the non-profit sectors, which today, if taken separately, constitutes the eighth largest economy in the world (Tulder and Zwart 2006, 61). Thus, it is safe to claim that the economic importance of civil society has increased. As a result one might today distinguish a dozen types of global governance arrangements. According to Scholte (2007, 309) the fastest growing global entities involve hybrid arrangements between public and private sectors, such as The Global Compact and the Global Fund. This has naturally resulted in the demand on planetary-scale regulation and global administrative law, which have been developed through trans-governmental networks (Ibid, 308). Thus, despite their popularity, public-private partnerships still seek their place and mandate in the public health setting.

Perhaps the best-known researchers of PPHPs Kent Buse and Gill Walt have published extensively and studied in particular the influence of health

partnerships on global governance. They define governance as "the systems of rules, norms, processes and institutions through which power and decision-making are exercised" (2002, 188). Buse and Walt (2002, 170) are concerned that partnerships will further fragment international development in health and challenge UN objectives for cooperation and universal health equity. Criticism of UN being inefficient, bureaucratic and suffering from inter-agency competition has paved the way for partnership structures (Ibid, 173). Thus, PPHPs, particularly those in which business sector is involved, are seen to be able to reach the set targets more efficiently (Ibid). This scenario prods the donors to replace the funds on partnerships' benefit and has tendency to lead to a self-sufficient rat-race (Ibid). Muraskin (2002, 120-121) however highlights the opposite, finding public-private partnerships important in filling in the gaps not covered by the UN agencies and carrying out projects too complicated for the UN system to realise effectively. Nevertheless, there is still lack of scientific evidence regarding the effectiveness of partnerships and the circumstances under which a public-private partnership approach to international health should be preferable to more traditional models (Barr 2007, 19).

Buse and Walt (2002, 188-189) have moreover expressed their doubt over the accountability and the potential negative impact of partnerships on health inequities, caused by focusing on narrow issues instead of complex, and to their understanding more critical problems. Barr (2007, 21) confirms their doubt. According to his study, 80% of partnerships (sample size 90 PPHPs) focused on one specific disease, whereas only one partnership aimed at bettering health systems afar specific diseases. To assure that PPHPs conform to the UN agencies, Buse and Walt recommend more

research and discussion on designing an independent regulatory body and guidelines on PPHPs that would enhance UN control of partnerships and the international health agenda (190-191). In particular, there has been a demand to develop WHO-led guidelines for drug donation programs and public health interaction with commercial enterprises (Lucas 2002, 33-34). WHO's general recommendations for PPHPs include beneficence (partnership should lead to public health gain), maleficence (not lead to ill-health), autonomy (not undermine partners' own autonomy) and equity (health benefits distributed to those most in need) (Buse and Walt 2000, 550).

2.2.4 Partnership types

Achieving the potential benefits of public-private health partnerships demands not only good-will to make the health tools available, but also capacity to manage effective organisational integration along the entire route from producer to consumer (Reich 2002, 15). Widdus (2005, 2) describes well how in an ideal world, new pharmaceutical products would move progressively along the research-development-access continuum as research would be translated into product concepts, further developed into proven products and finally manufactured. The products would go through regulatory authorisation to certify patient safety and get used in a well-functioning health care system. However, at current time prevention and treatment of major tropical diseases such as HIV, Malaria and TB are inadequate as there are no vaccines and many existing diagnostic tools and therapies are threatened by increasing resistance or are difficult to use. Effective and efficacious therapies do not reach all those in need, be it for

financial or infrastructural reasoning. To overcome the market and government failure, PPHPs have been established and for the most part can be clustered into following two groups: those dealing with the development of new health products, the so-called product development partnerships (PD PPPs), and those concerned with improved procurement and distribution, the so-called access to medicines partnerships (Access PPPs) (Widdus 2005, 5). Today more resources and research are being directed to PD PPPs that aim to foster research in communicable, tropical diseases. However, this thesis focuses solely on internationally operating access PPPs nevertheless here both types of partnerships will be briefly described.

2.2.4.1 Product development partnerships

Many tropical, neglected diseases present in the developing countries lack treatment and preventive measures, therefore, more research and development (R&D) is needed. Public-private partnerships for product development (PD PPPs) have emerged during the past five years as rising drug development costs have pushed pharmaceutical companies out of R&D for the diseases of the developing world (Croft 2005, 9). Pharmaceutical companies are after all commercial entities with shareholders to consider. New medicines are very expensive to develop as drug development in average takes 10 years and only 10 % of initial projects reach the clinical trials (Croft 2005, 9). Poor do not provide a good return on this investment. However, corporate world has recently taken an interest in socially responsible behaviour and the collective purchasing power of low-income population is being recognised (Prahalad 2005, 3-6). The discussion on private sector's role in PPHPs will be continued in chapter 2.3.

Nevertheless, sufficiency and sustainability of funding remain serious challenges in PD PPPs. The partnerships need to widen their funding base and ensure the funders understand the high level of risk involved in drug R&D (Widdus 2005, 4).

The highly regulated, complex and investment-intensive pharmaceutical manufacturing facilities demand an advanced business environment and thus, typically locate in high-income countries. Vaccine manufacturing facilities and conditions are even more heavily regulated. Thus, building a suitable plant requires dutifully controlled circumstances, important investments and an environment where advanced sourcing possibilities co-exist with the availability of educated labour. Naturally, these manufacturing related restrictions lead to high inflexibility in production capacity increasing the need for predictability of production volumes and making unanticipated capacity changes nearly impossible. This limitation impacts significantly PPHPs operational environment. So, vaccines to LDC markets are typically manufactured in a Northern country and exported to the LDC. Importing drugs and vaccines to developing countries sets additional exigencies including advanced logistical conditions for example in order to sustain the cold chain required for the conveyance of vaccines. Furthermore, due to international trade regulations such as quotas or for the lack of new drug and vaccine approving health authorities, corruption or national political challenges, difficulties to import foreign manufactured medical products might persist. Alternatively, foreign manufacturing costs can remain too high to find an affordable price range to the local populations. These markets related challenges will be further discussed in the next

chapter 2.2.4.2 and some of their solutions will be sought after in chapter 2.3.

Production in local markets, for example through licensing, might provide some answers to the aforementioned challenges. Morel et al. (2005, 401) bring up the growing ability of some developing countries to undertake health innovation in the form of health innovation networks. Gardner, Acharaya and Yach (2007, 1057-1059) equally raise the growing capacity for innovation in some developing countries. To their opinion "a strong capacity for innovation in developing countries represents the only truly sustainable means of improving the effectiveness of health systems. Local public-private research and development partnerships and individual leadership are needed to achieve this goal". However, for a commercial firm there is little incentive to build capacity for the developing countries, for the risk of failing demand (Fink 2004). The situation for LDCs is critical as global vaccine manufacturing capacity in general is finite, already causing shortages of licensed vaccines and constructing a new plant takes on average five years (Ibid). Across the vaccine field, addressing the shortages in process development and manufacturing capacity and the need for coordination has now been acknowledged as insufficient capacity is slowing of the entire vaccine development pipeline (Ibid). This proves how inter-linked research, development and manufacturing are. Further, Croft (2005, 9) believes that despite the challenges, PD PPPs can be an efficient model for bridging the gap between basic research and clinical development by bringing together expertise from academia, the pharmaceutical industry and the public sector.

2.2.4.2 Access partnerships

Public-private partnerships that aim to better access to health products tackle to surmount environmental challenges in getting the therapies from the manufacturer to those in need in developing countries. In general, pharmaceutical products targeted to global use have a rather slow introduction into the poor countries due to inadequate infrastructure and planning, logistical difficulties in storage and in delivery of fragile medicines, high pricing, and other market challenges such as lack of distribution channels, strict international trade regulations and cultural issues (Widdus 2005, 2). These setbacks result in significant losses of medicines and according to World Bank estimates for every USD 100 spent by African governments on drugs, only USD 12 worth of drugs and vaccines reaches patients (PHRMA 2008). Pharmaceutical industry is also concerned of parallel imports, in other words of the risk of goods that are rightfully produced under a patent and placed into distribution in one market, returning illegally imported into a second market without the authorisation of the owner of intellectual property right (Maskus 2000, 1269). Parallel imports take away industry's profits from international sales and thus further decreasing pharmaceuticals interest in developing country markets (Ibid). The lack of drug and vaccine distribution has moreover created fostering market conditions for counterfeit drugs.

Access partnerships further face the political challenge of getting the support of local authorities to the initiative. It is impossible to create sustainable approaches to public health without the consent and support of the local authorities and their willingness to incorporate the actions into the public bureaucracies. For example Global Polio Eradication Initiative works with

governments in developing countries where poliomyelitis is endemic by organising national immunisation days (NIDs) (WHO 2003, 9). Vaccine industry sells the vaccines at cost to GAVI or other procuring agents and the local health authorities then benefit from the decreasing prices due to high volumes. At times pharmaceuticals make philanthropic vaccines donations to PPHPs and sometimes MLOs are able to subsidise part of the price (Polio info 2007). These actions decrease the financial burden of the local government. A widespread social mobilisation and communication campaign precedes each NID to ensure that the maximum number of children will be vaccinated (WHO 2003, 9). The GPEI has succeeded to reduce the incidence of polio by more than 99% since its launch in 1988, from 350,000 annual cases to 2,000 cases in 2006 (Polio Info 2006b). A series of other studies on drug access PPPs confirm that these health partnerships have remarkable benefits significantly improving drug availability and capacity building in target countries without twisting other health priorities at local level (Widdus 2005, 7).

However, as the number of PPHPs increases the question of how many initiatives can a single recipient country handle simultaneously is being raised (Reich 2000, 620). Many ventures target same vulnerable LDCs and as the previous example on polio eradication showed, a successful campaign often demands (already inadequate) resources of local governments. In order to administer sustainably public health challenges, it is recommended for the PPHPs to involve and partner with the target country authorities. The stakeholders and their respective roles in health partnerships will be introduced and briefly discussed in the next chapter.

2.2.5 Stakeholders

Primary stakeholders are defined as "those persons or groups of persons without whom the partnership cannot realise its objectives" (Tulder and Zwart 2006, 136). The stakeholders of public-private health partnerships are numerous. To give an example, the oldest drug access partnership Merck Mectizan Donation Program (MDP) for onchocerciasis (river blindness) is for instance an alliance between Merck pharmaceutical, World Bank, Unicef, World Health Organization and other MLOs, NGOs, private foundations, local governments in countries where onchocerciasis is endemic and their ministries of health (MDP 2008).

In this study, the stakeholders are being clustered into governmental (state), civil society (non-profits) and private sector (market, business) organisations as suggested by Widdus (2005, 4), and Tulder and Zwart (2006, 8-9; 20-23). The functioning of these three institutions defines the way in which society functions as whole (Tulder and Zwart 2006, 8). Through legislation, the government creates the legal framework that structures the society (Ibid 8-9). The business sector primarily creates value and welfare for society by turning inputs (such as natural resources, labour and finances) into outputs (such as goods and services) within the legal framework (Ibid). The civil society represents the network of citizens that structure society outside politics and business (Ibid). Next the three stakeholder groups will be briefly presented describing their roles, inputs and interactions.

2.2.5.1 Governmental organisations

Multilateral organisations (MLOs) – Intergovernmental organisations, namely regional organisations such as African Union and European Union or universal like World Bank or United Nations and its special agencies including WHO and Unicef, coordinate international humanitarian and development operations. These institutions are controlled by governments and usually financed by member states, led by a democratically elected representative of member states and governed by independent executive committees. MLOs have in general taken an interest in partnering with the private sector primarily in order to access new resources, acknowledging the expanding role of corporations (Buse and Walt 2002, 179-180). Due to their (perceived) political neutrality, MLOs often act as mediators between separate stakeholders and further represent the whole public-private partnership in negotiations with external parties (Widdus 2005, 7). Equally, they might negotiate on behalf of LDC coalition and in areas where multiple initiatives exist, MLOs coordinate and support local authorities to reduce fragmentation (Ibid).

National governments and health authorities – National governments can be either in a giving or receiving role as partners in a PPHP. The giving government, traditionally a high-income country, its ministry or special department, is being referred as a funding partner. The receiving government, reciprocally traditionally a low-income country, is often referred as a local partner. Customarily, giving countries channel ear-marked funding for social development through the medium of United Nations System providing capital and resources to MLOs' activities. However, according to UN-USG John Holmes (2008) some changes might be ahead as

the donor base is currently broadening as emerging and developing countries are increasingly participating in funding development aid. Additionally, some countries, such as Saudi Arabia and China, give millions of dollars annually in humanitarian aid but in almost exclusively bilateral aid. Further, national governments and health ministries in LDCs participate in health policy formulation and are sometimes able to purchase health products with tax funds. They partner PPHPs by ensuring the infrastructure for initiatives and communicating to target population. MLOs usually advice and assist governments in these actions. However, due to the inadequate resources and, sometimes poor administration, corruption and low level of responsibility build barriers between the international agencies and the receiving population. The sustainability of achieved results lie in the hands of local actors and thus, professional partnerships prioritise capacity building.

2.2.5.2 Civil society organisations

Non-governmental organisations (NGOs) – NGOs are humanitarian or cooperative actors, that pursue activities to relieve suffering, promote the interests of the poor or provide basic social services in developing countries (Werker and Ahmed 2007, 2). These non-profit making organisations are flexible entities working close to the field and bringing concrete aid where needed. NGOs such as Red Cross International, Medecins Sans Frontieres, Save the Children and Oxfam are being viewed as respectful actors in international health and wanted partners in PPHPs due to their access to locals and thus, having up-to-date information of local conditions, relevant to successful implementation of PPHPs' action plans. Thus, one must separate NGOs individual work of that in a public-private partnership. The

largest financial contributors to NGOs are national governments and individual private donors (Werker and Ahmed 2007, 8-9). Non-governmental organisations might receive part of their funding for carrying out day-to-day operations on behalf of national governments and MLOs (Ibid, 2). For example NGOs act as not-for-profit contractors for UN agencies, and further, United Nations High Commissioner for Refugees (UNHCR) allocated in 2006 USD 315.3 million to its so-called implementing partners (United Nations 2007). NGOs have gained influence since the 1970s, and combined with the explosion in the number of third sector actors, Reich (2000, 617-618) has estimated that the global health challenges were originally pushed onto the international policy agenda by non-governmental organisations.

Private foundations – The philanthropic institutions such as Clinton Foundation, Rockefeller Foundation or Bill and Melinda Gates Foundations can provide substantial funds with the ability to act as catalysts and influence the political agenda of initiatives. There are also foundations that work similarly to NGOs working in the field as a separate entity or they may have R&D activity in a field that is not lucrative enough for private sector. Private foundations are often able to act faster than global corporations or MLOs and with more resources than NGOs. However, they are sometimes criticised for distorting the development aid landscape and opportunistic behaviour to advance their personal goals.

Academia – Universities are particularly active in product development partnerships building bridges in international research networks and thus, importantly bringing in local scientists in developing countries (Gardner,

Acharaya and Yach 2007, 1057-1058). Prominent scholars participate actively in the discussion on PPHPs beyond the borders of academia and take responsible positions within governmental, civil society and business institutions. American economist, Professor Jeffrey Sachs of the School of International and Public Affairs at Columbia University, is a good example as he also acts as Special Advisor to United Nations Secretary-General Ban Ki-moon on MDGs (Columbia University 2008). He has also advised numerous governments in Latin America, Asia, and Africa and is known for his work with international agencies on problems of poverty reduction, and disease control, especially HIV/AIDS (Ibid). Higher education institutions provide the global health arena with research, reflection and recommendations. Academia commonly receives large part of its funding from the state, which is completed with individual and business sector donations however the relative portions differ from country to another.

2.2.5.3 Private sector organisations

The business sector that is mostly involved in public-private health partnerships consists of pharmaceutical industry and other health sector companies. Pharmaceuticals possess unique technical know-how and thus, getting them involved can be critical to the success of the initiative. Private sector's role can be philanthropic, transactional or integrative according to the depth and level of commitment to the partnership (Austin 2000a, 20-29). Pharmaceutical manufacturers use differentiated, or tier-pricing to sell drugs at cost. Private sector partners' motives vary and some companies see it as a moral obligation, as part of socially responsible business behaviour, some see it more from the financial point of view decreasing shareholders' risk of

unwanted publicity and as strength in public relations, brand management, recruitment and human resources retention. Business organisations stand out of the governmental and civil society actors in relation to accountability. Private sector entities' management is held accountable to the company's shareholders and is expected to maximise performance (Buse and Walt 2002, 189). Therefore, for many, a major concern in PPHPs is the conflicts of interests and the company's possible tendency to promote its vested interests. Traditionally private sector rarely acts as the driving force for a PPHP, on the contrary they are approached by governmental and civil society actors (Jommi 2006). Historically most active pharmaceuticals in PPHPs include Merck, GlaxoSmithKline, Novartis and Sanofi-Aventis. Next chapter will concentrate on discussing private sector partners' role in detail.

2.3 The role of private sector in public-private health partnerships

This chapter focuses on the market-based, for-profit sector partner's role in internationally operating public-private health partnerships that target to better access to drugs and vaccines. There are today over 100 ventures involving health sector companies that can be described as PPHPs (Widdus 2005, 5). Globalisation has amplified private sector's role in relation to states yet, the consolidation vague of the 1990s has further increased the power of individual companies (Buse and Walt 2002, 175). Tony Blair recently stated how the intersection between politics and the economy in the different parts of the world, including the emerging markets, is very strong (Wighton 2008, 1). Thus, the rise of strategic alliances, as noted in chapter 2.1.1 makes it natural for companies to extend this form of organisation to

its relations with public sector entities (Richter 2004, 48; Buse and Walt 2002, 175).

Public-private partnerships are not legally joint ventures in the business sense but alliances with shared objectives, decision-making and risk taking (Widdus 2005, 4). The motivations of the partners vary, as do their contributions and benefits they expect to receive in return (Ibid). According to Reich (2002, 9) considerable scepticism exists about the motives of private firms that engage in partnerships, even when the efforts have major public health benefits. Private firms are seen as opportunistic entities and assumed to exploit the partnership agreements to seek new markets or subsidies for product development, tax deductions or control over the agendas of international organisations (Ibid). There is no doubt that firms are primarily profit-seeking organisations, the question is whether they can participate effectively in partnerships that address global health inequities. However, little scientific literature exists on the actual roles played by the partners in PPHPs (Curtis, Gabrah-Aidoo and Scott 2007, 634). The goal of a partnership is evidently to harness complementary contributions from the business and public sectors for the benefit of the shared goal (Ibid). Nevertheless, the strength of the scepticism in the public sector towards commercial organisations reflects a cultural gap between the sectors, as well as real problems that require serious ethical consideration.

Health is serious. Good working relations, well integrated processes and seamless cooperation between partners can be a question of life and death. Richter (2004, 19-41) pinpoints how the tobacco industry's efforts to undermine WHO's tobacco control activities in the 1990s have thrown

shadows on public-private collaboration including the pharmaceutical industry's participation in PPHPs and further, discusses arising conflicts of interest in the context of global health and management strategies. Clearly, the challenge for both nonprofits and business corporations is to find ways of working together that are mutually beneficial. Regulations are one way to tackle the mistrust. As discussed in chapter 2.2.3 Lucas (2002, 33-34) has suggested development of universal guidelines for philanthropic single-disease drug donation programs in addition to the current guidelines for drug donations. The new guidelines would seek companies' long-term commitment, promote effective management and collaboration with partners, and protect against conflicts of interest (Ibid). Richter (2004, 19-20) supports this view but notes that no comprehensive, ethical framework to guide global health partnerships has been produced to date despite of the efforts and endless discussion. Muraskin (2002, 156) describes the challenge in an explicit manner: "For the private sector to successfully cooperate with the public sector it is necessary for the latter to understand and accept the basic legitimacy of private enterprise and the profit motive that drives it; that is very hard for many public health officials to do when children are sick and dying from the lack of money to buy vaccines."

Moreover, it must be noted that risks exist in PPHPs for market-based partners, similarly than in strategic alliances discusses in chapter 2.1.1. The objectives of the collaboration may not be reached or the ownership of intellectual property may be lost. To reduce these risks, one can set contractual limits to partnership transparency and manage the allocation of partner contributions, alliance structure, and governance decisions in order to further limit the loss of intellectual capital (Baughn et al 1997, 109).

However, when a local governmental body is the leading partner, transparency cannot necessarily be guaranteed and thus the legal system cannot be relied upon to implement an agreement favourable to the foreign sponsor (Ibid).

The role of private sector partner varies from partnership to another and can evolve during time. According to Austin (2000, 20-29) collaborations between the corporate world and civil society organisations fall into one of three categories: philanthropic (donation oriented), transactional (bilateral relationship with a two way value flow), and integrative (relationships built on the joint production of goods or services with a shared value chain). As the companies' role and responsibilities increase when moving along this continuum towards integrated work, as shown in the Figure 5, relationship complexity increases with the value creation potential for parties and their environment (Austin 2000, 20-29).

NATURE OF RELATIONSHIP	PHILAN-THROPIC	TRANSAC-TIONAL	INTEG-RATIVE
Level of engagement	Low	→	High
Importance to mission	Peripheral	→	Central
Scale of resources	Small	→	Big
Scope of activities	Narrow	→	Broad
Interaction frequency	Infrequent	→	Intensive
Management style	Simple	→	Complex
Strategic value	Minor	→	Major

FIGURE 5: THE CROSS-SECTORAL COLLABORATION CONTINUUM.

Source: Austin 2000, 34-38.

But should the private sector be considered responsible and given a role for tackling major societal issues? Leisinger (2005, 577) states that global poverty and poor health conditions are the main the responsibilities of the world's national governments and international governmental organisations, which solely possess society's mandate and appropriate organisational capabilities. However, private enterprises do have responsibilities to society per se. Tulder and Zwart (2006, 192) agree maintaining that firms only have an indirect responsibility for issues located at the state-civil society

interface, including international health. However, business ethics claim that global health companies have a special obligation to help because of their competence, resources, and expertise, their capacity to make a significant contribution to the health of poor people (Roberts, Breitenstein and Roberts 2002, 78). Another ethics scholar, Dunfee (2006, 186) affirms that firms possessing a unique human catastrophe rescue competency have a moral obligation to devote substantial resources toward best efforts to aid the victims of the catastrophe. The uniqueness of pharmaceuticals position arises from the fact that they produce, hold patents to or distribute drugs that comprise essential components of the current therapies (Ibid, 189-190). Even governmental agencies are dependent upon the firms (Ibid). Dunfee (2005, 191-192) further proclaims the need for health companies to provide detailed financial information pertaining to their cash donations and social initiatives. However, it is clear that this is a multi-billion dollar activity and that there is significant diversity in programs unique to each firm (Ibid). The International Federation of Pharmaceutical Manufacturers (IFPMA) estimates that in 2005 researched-based biopharmaceutical companies donated globally about USD 3 billion in medical products (IFPMA 2008).

Following the HIV medication crisis, large pharmaceutical corporations have come under particular pressure to give intellectual property rights, to reduce drug prices, and to reallocate research capabilities to neglected tropical diseases (Leisinger 2005, 577-578). Social responsibility in the pharmaceutical industry, as in other sectors, encompasses responsibilities with differing degrees of obligation. Tulder and Zwart (2006, 196) state that "a company secures its licence to operate through being seen as a good member of society". When taking up these societal positions, companies

have to assess at least the following five interfaces of PPPs: local/national/regional/global connections, boundaries of public-private spheres, interactions between profit-non-profit sectors, technology-society continuum (as technologically feasible innovations might not be socially desirable) and reflect between operational and visionary strategies (Ibid, 126-127). Private sector partner's ability to support global health initiatives will be discussed in the next chapter, followed by the drivers and motives for an individual company to join a public-private health partnership.

2.3.1 Private sector involvement

The ability of the public sector to achieve universal access to health products is "inextricably linked" with the behaviour of the vaccine-pharmaceutical industry (Buse and Walt 2002, 174). This chapter discusses the expectations that governmental and civil society organisations have for the collaboration with the private (for-profit) sector and how business sector is seen to be able to assist in reaching the shared objectives of public-private health partnerships.

2.3.1.1 Drug and vaccine access acceleration

The principal reasoning for pharmaceutical industry's involvement in PPHPs is their ability to literally facilitate access to existing therapies and in this, their role is crucial. According to Reich's extensive studies (2000, 619) in cases where public-private collaboration occurred during the R&D phase of a drug, but an effective partnership for its distribution failed to emerge, the access was substantially limited and potential public health gains were

not achieved. Furthermore, PPHPs being mostly Northern initiatives, well-trusted brands and globally known corporate partners can greatly fasten the local market access in Southern countries, ease building trust and bring a foreign partnership greater influence within (local) public health authorities (Quelch, Austin and Laidler-Kylander et al. 2004, 24). As public health efforts cannot be brought into effect from the outside they require approval from the local authorities and sustainability of initiative's efforts depends on its ability to build capacity, motivate, involve and empower local actors (Ibid). To continue, PPHPs find vital to have pharmaceutical manufacturers involved in the initiative in order to guarantee adequate production capacity and availability of drugs and vaccines. Governments cannot by themselves ensure the successful attainment of health goals. Nevertheless, it is absolutely out of the question to believe that the private sector would be taking the role of governmental agencies (ECOSOC 2008a). The best thing private companies can do is to spread technologies such as medicines to fight killer diseases (Ibid).

2.3.1.2 Corporate culture, expertise and capacity building

Public-private partnerships may transfer the UN entrepreneurial talent and business culture and possibly thus, improve its efficiency (Buse and Walt 2002, 174). Private sector is repeatedly wished to bring advice, efficiency and efficacy into the public sector bureaucracy and build capacities within recipient country (Buse and Walt 2000, 556). However, it is good to note in this context that all the disciplines of economics, philosophy and political sciences recognise the fundamental conflict between efficiency and equity (Tulder and Zwart 2006, 153). In other words PPHPs can be seen as a way

of introducing management capacity and promoting entrepreneurship in the public sector (Jommi 2006). For example, consumer goods companies can transfer its marketing and public communications competencies to health professions (Curtis, Gabrah-Aidoo and Scott 2007, 634). In an exemplary preventive health and personal hygiene PPHP, the for-profit partner built capacities by training the local health authorities to understand consumer motivation, plan for effective reach, and ensure effectiveness of the campaign and its launch (Ibid).

2.3.1.3 Bestowal of authority and relationships

Governmental organisations in particular seek to bestow credibility and legitimacy in the corporate-dominated world. The market-based actors' role might thus, be representative. Buse and Walt (2000, 553) go as far as to claim that tighter relations and collaboration with the industry may aid United Nations to win the support among various constituencies, including the US Congress. In general, governmental and civil society actors wish to enhance cooperation and trust in their relationship to private sector partners (Jommi 2006). According to corporatist political theory, involving industry as a stakeholder in the public affairs may harness industrial support and authority for political entities (Buse and Walt 2000, 553). Further, a partnership with business and civil society may give to non-profits greater influence with the policy-makers (Quelch, Austin and Laidler-Kylander 2004, 24). Austin (2000a, 8-11) confirms that non-profits are expanding their partnerships to include the private sector, they are more openly searching common grounds to link the community needs with the business interests of corporations.

2.3.1.4 Financial resources and sustainability

Business sector is wished to top resources for international development and thus, enable the multilateral organisations to fulfil their mandates (Buse and Walt 2000, 553; 556). As mentioned in chapter 1.1, aid contributions from non-governmental actors, including businesses and foundations, rose USD 3.1 billion in 2006 while those from OECD governments fell USD 4.7 billion (OECD 2007). In other words, in the public affairs environment, where resources are scarce and tax funds constantly insufficient, as an option to privatisation, partnering with a market-based organisation can alleviate budgetary constraints (Jommi 2006). In the public health context, literature shows that continued support by donors in intensive phases of elimination and control is vital if resurgence of disease is to be avoided (Widdus 2005, 7). Industry may give direct financial support but also motivate donors and volunteers to increase their commitment (Quelch, Austin and Laidler-Kylander 2004, 24). Nevertheless, in order to assure sustainability, access PPPs must also ensure that their operations are integrated with the local health system (Widdus 2005, 7). Failure to do this for example resulted in the resurgence of sleeping sickness in Uganda when project staff withdrew after disease control was achieved (Ibid).

2.3.1.5 Economic growth for local markets

For-profits in access to health partnerships are expected to advance operating environments for national industries and companies as well as further facilitate direct business opportunities for the local business sector

(Buse and Walt 2000, 556). Sceptics have voiced doubts about the political motives of Western private actors in relation to their philanthropic activities in under-developed and closed market economies. If a market-based for-profit firm partners an initiative, the effects of the PPHP in a highly regulated, closed market may well and truly be quite different than those in a more loosely regulated, free-market economy (Barr 2007, 22).

2.3.2 Private sector drivers

Expectations of firms have evolved over time. The long-standing, undisputed corporate dictum of "creating value for shareholders" is being replaced by a broader notion of "creating value for all stakeholders" incorporating the entire social environment of company operations (Austin, Reficco and Herrero 2004, 1). The trend towards public-private partnerships may be related to the change in public attitudes and to private sector's concerns and vocal demands for corporate responsibility and accountability (Buse and Walt 2000, 552). This recognition has been stimulated by the strength of consumer, environmentalist, and other civil society group actions in industrialised countries, which have further motivated international companies' to join societal ventures. This chapter discusses health care companies' expectations and motives to incorporate social variables to their core corporate strategies.

2.3.2.1 Enhanced corporate citizenship and corporate social responsibility

The corporate world is undergoing a profound transformation that is effectively changing the way business is done. The concepts of corporate

social responsibility (CSR), meaning sense of obligation and corporate citizenship (CR), referring to rights and responsibilities of the organisation, have changed the equation (United Nations Foundation 2003). Businesses are aware that their customers and shareholders expect firms to not only appear but to act like a responsible "citizen" by supporting important community issues and events (Quelch, Austin and Laidler-Kylander 2004, 24). Further, Klaus Schwab, the founder and chair of World Economic Forum of Davos (2008, 116) is convinced that "since companies depend on global development, which in turn relies on stability and increased prosperity, it is in their direct interest to help improve the state of the world". In this context, innovative and high-visibility public-private partnerships are being represented as win-win deals for companies to achieve their social responsibility goals, while helping the governmental organisations to meet the needs in LDCs.

According to Nijhof, Bruijin and Honders (2008, 157-162), the drivers for CSR include strengthening organisational identity (value-based), need to reflect the organisation's position in society (dialogue-based), preventing reputation damage and developing commercial opportunities (stakeholder-based). Further, smart CSR is believed to be in the corporation's self-interest and contribute to the bottom line (Erdmann, Kline and Mendonca 2008, 4). Following this idea, societal affairs are increasingly integrated into more functional areas of management such as marketing, quality control, financial management, supply management, R&D and human resources management (Tulder and Zwart 2006, 150-152).

Tulder and Zwart (2006, 192-198) classify companies' social programs under the concept of corporate citizenship. According to the degree of commitment, motivation and scope of company's societal activities the following four approaches can be distinguished: inactive, reactive, active or proactive. Inactive firm have the most limited approach, framing their behaviour according to the society's minimal legal requirements and have no philanthropic engagements. Reactive corporate citizenship is being applied to companies that respond to public policy issues when it is in the company's interest to do so, for example when the lack of health services affects the firm's workforce. Donation from business partner's own product portfolio, which is then employed as a PR instrument, is a typical indication of reactive citizenship. Active firms address non-profit issues, though within the company's operational interest. For example a vaccine manufacturer could participate pro bono as an external consultant in planning WHO's vaccination programs or organise immunisation for its own employees in developing countries for the lack of public health care services. However, active corporate citizenship may involve some risk factors as the business entities typically do not involve the outside societal environment in their decision-making but act independently. Austin (2000a, 20) notes that corporations who recognise the opportunities and benefits of working with non-profit organisations often want to move beyond traditional charitable activities to a relationship that is more entrepreneurial and business like. The businesses that show the highest degree of commitment in societal affairs are classified according to Tulder and Zwart (2006, 192-198) as proactive. These organisations focus on the structural causes of social challenges and target to find sustainable approach and build local capacities. Contrary to the active response to CSR, proactive organisations act without reference to any

short-term interest of the company and do not seek to replace governmental or civil society action through their own initiatives. Proactive corporate citizenship requires the top management's strong personal commitment to the public (health) interest. Figure 6 shows the different approaches to CSR in a continuum. Finally, corporate citizenship is mainly driven by internal corporate values and customer feedback (Ibid).

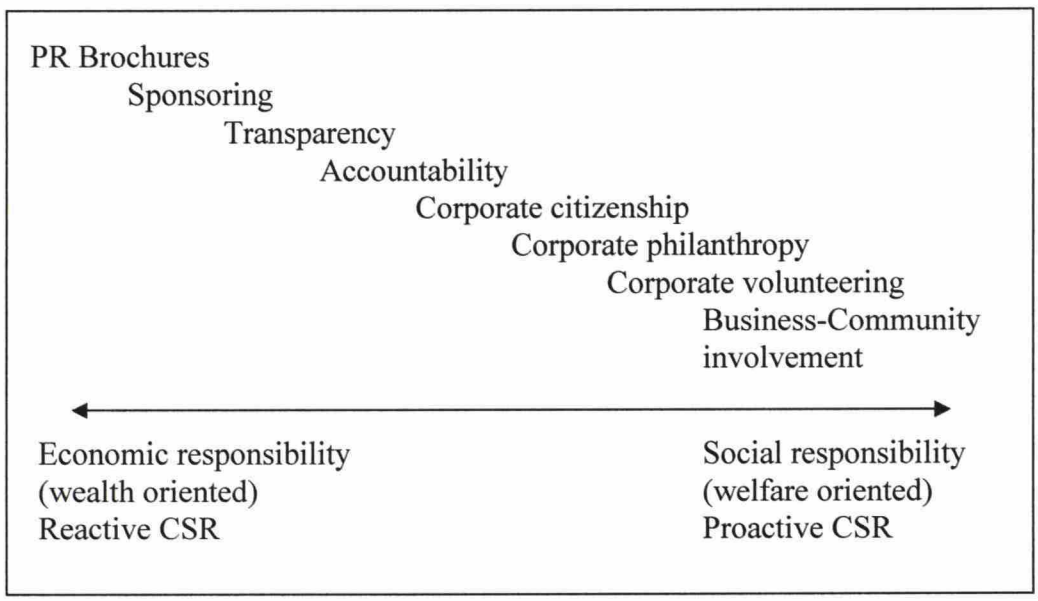


FIGURE 6: APPROACHES TO CORPORATE SOCIAL RESPONSIBILITY.

Source: adapted from Tulder and Zwart 2006, 144.

2.3.2.2 Market creation

The purchasing power of currently under-served low-income population is being recognised, that has increased business sector's interest in public-

private health partnerships. According to Buse and Walt (2002, 177-178) market creation is indeed the explicit goal of a number of firms in UN-industry partnerships. Indian-American scholar C. K. Prahalad's topical studies aim to further rationalise and convince foreign businesses of the opportunities that lie in the developing markets, his reasoning being firmly anchored in the interconnectedness of economic development and social transformation as visualised in Figure 7.

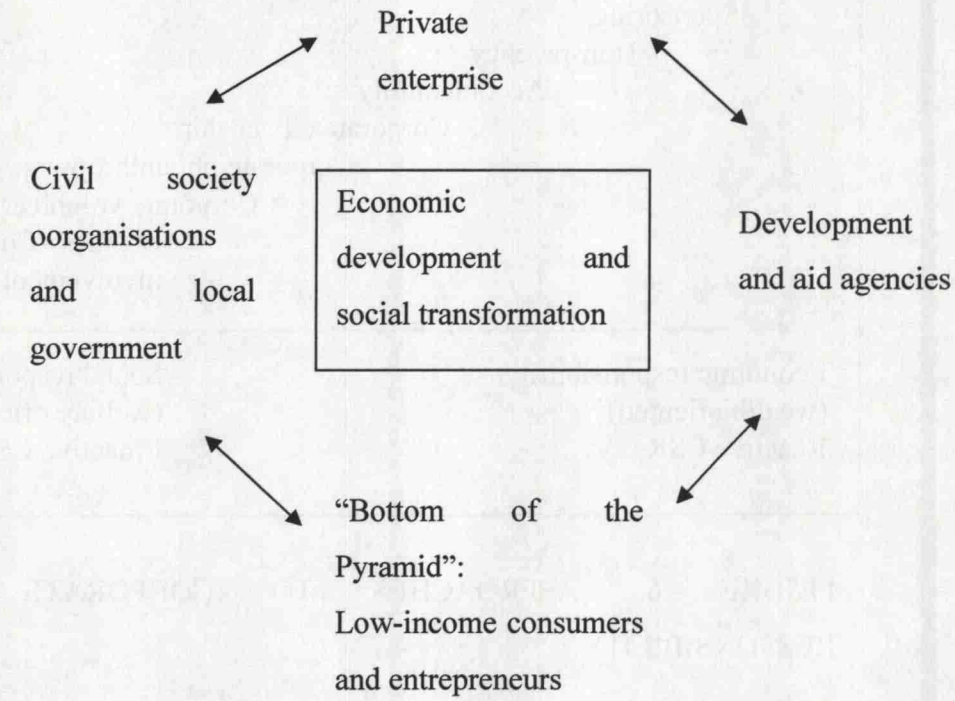


FIGURE 7: INTERCONNECTEDNESS OF ECONOMIC DEVELOPMENT AND SOCIAL CHANGE.

Source: Prahalad 2005, 2.

Prahalad's primary argument highlights the fast-growing market potential of the world's four billion poor, the so-called "bottom of the pyramid", estimated to represent collectively an economy of USD 13 trillion (Ibid, 21). An aspiration to a new quality of life is the dream of everyone, maybe even more for the low-income nations (Ibid, 14). Therefore, brand consciousness among the poor is universal nevertheless these consumers represent a new challenge for businesses with increased cost pressure on companies' development, manufacturing and distribution expenses (Ibid). Thus, traditional products or approaches will not succeed among the poor and in order to convert the bottom of the pyramid into a consumer market, the capacity to consume must be developed (Ibid, 16). Industry participation in public-private health partnerships can thus be motivated by the opportunity for new market identification, development, penetration and manipulation or by direct financial benefits in the form of tax breaks or public subsidisation of innovative products and services, which would otherwise be uncompetitive in the short-term (Jommi 2006; Andonova and Levy 2003, 21; Buse and Walt 2000, 556).

2.3.2.3 Brand management

Public-private health partnerships can improve corporate image (Buse and Walt 2000, 552). Thus, high visibility and sexy causes find it easier to find partners and financial resources for their lucrative co-branding opportunities (Quelch, Austin and Laidler-Kylander 2004, 24). Those public partners with a high value brand, for instance UN agencies, Amnesty International or the Red Cross, should be able to arrive at a fair pricing structure for partnerships

and screen an array of alliance opportunities (Ibid). The business partner might like to evaluate how important the not-for profit brand name is to earnings, what sort of pull it has in the market and how the initiative or partner is viewed within their stakeholders (Ibid). Originally, the public image of the pharmaceutical sector commenced to suffer at the introduction of HIV therapies in the late 1990s. Today, the public continues to believe that the industry enjoys unnecessary high product margins exploiting sick and poor (Jommi 2006). However, taking into consideration the significantly high investments in research and development and the risk involved, this might be rather short-sighted view. Nevertheless, a more immediate benefit of PPHP to business can be said to lie in the public relations, image promotion and brand development (Buse and Walt 2000, 556).

Buse and Walt (2000, 556) have studied Merck's role in the Mectizan Donation Program. The American pharmaceutical has stated that ''the program has served to enhance Merck's corporate image and increase recognition of Merck's name, and helped build relationships and alliances between its key constituents''. PR events have included a dinner at the UN and a major article in the NY Times. The donation has also given the firm an opportunity to present a caring face to WHO and the international community of public health officials. In May 1994, the WHO Director-General decided that a Merck spokesperson could address the World Health Assembly, the first time in history of the Assembly a corporation was invited to participate (Buse and Walt 2000, 556).

2.3.2.4 Interaction with governmental actors

Earlier, in chapter 2.3.1, it was discussed how private sector can transfer skills and build capacity in developing countries as part of public-private health partnership agreement. Nevertheless, businesses have equally much to learn from governments as they compete in an increasingly complex global landscape (Erdmann, Kline and Mendonca 2008, 6). The partnership can give the much needed authority and added legitimacy to private sector partners through association with respected governmental organisations (Buse and Walt 2000, 556). In practise this can translate into opportunities in the development and implementation of global trade regulations, policy-making and health standards or enable to gain access to policy-makers, institutions, networks and information (Ibid; Jommi 2006). Today, the business environment has become increasingly political demanding tremendous transparency, greater accountability, independent stakeholders, and there's less freedom to manoeuvre (Ibid, 6-7). However, it seems that the management literature neither the higher business education has yet understood this. Also, businesses need a degree of predictability, particularly if they are making long-term investments (Erdmann, Kline and Mendonca 2008, 4). Further, those multinational companies that operate in LDCs, domestic governance failures and political instability increase the risk of investment (Andonova and Levy 2003, 21). Proximity to governmental organisations can then further decrease this risk. In the context of global health, Buse and Walt (2002, 179) state that some partnerships have been promoted to decrease the risk of compulsory licensing. Moreover, in exchange to selling tier-priced medication to LDCs, the industry has asked for strengthened intellectual property protection (Buse and Walt 2002, 174).

2.3.2.5 Human resources management

Societal partnership can help the company attract and retain high-caliber employees and board members (Quelch, Austin and Laidler-Kylander 2004, 24). Somewhat surprisingly, public-private partnerships have become companies' competitive advantage in human resources management. Financial Times wrote in February 2008: "Business school students once coveted jobs in finance and consulting. Now they want to save the world. They once strove to accumulate wealth. Now, before they've even made it, they learn how to give it away". The reasons for the interest in community engagement and social enterprise can arise from corporate scandals of the late 1990s and the events of September 11 2001, as well as increased awareness of global issues such as health inequality and climate change (Ryckman 2008). Furthermore, in recent years the fluidity for employees to crossover corporate, non-profit and public sectors has increased and created more professional civil society organisations and a business world with a social conscience (Ibid).

3 Theoretical framework

The aim of this research is to contribute to the discussion on private sector's, notably on pharmaceutical industry's, involvement in international health. The literature review in previous section presented the scientific discussion on strategic alliances, public-private health partnerships and private sector's role in these partnerships. It laid the foundation for the theoretical framework, as seen in Figure 8. I developed the framework in order to illustrate the literature review in a simple model.

Further, public-private partnerships being an object of multidisciplinary research from public health sciences and development studies to social and political sciences, this study was chosen to be realised in the context of economic science within the discipline of international business. Due to structural changes in society and progressing interconnectedness of the world, business cannot be separated from the rest of society, but seen next to public and civil society actors. Historically, research on international business concentrated first after World War II on international trade and foreign direct investments (FDI) developing steadily into a study on multinational corporations (MNC) and international management issues. With the rise of globalisation and information technology revolution, international business has taken an interest in emerging economies, virtual networks and third sector growth broadening its scope from traditional managerial issues. To conclude, research on multi-stakeholder partnerships in the context of international business is thus, pertinent.

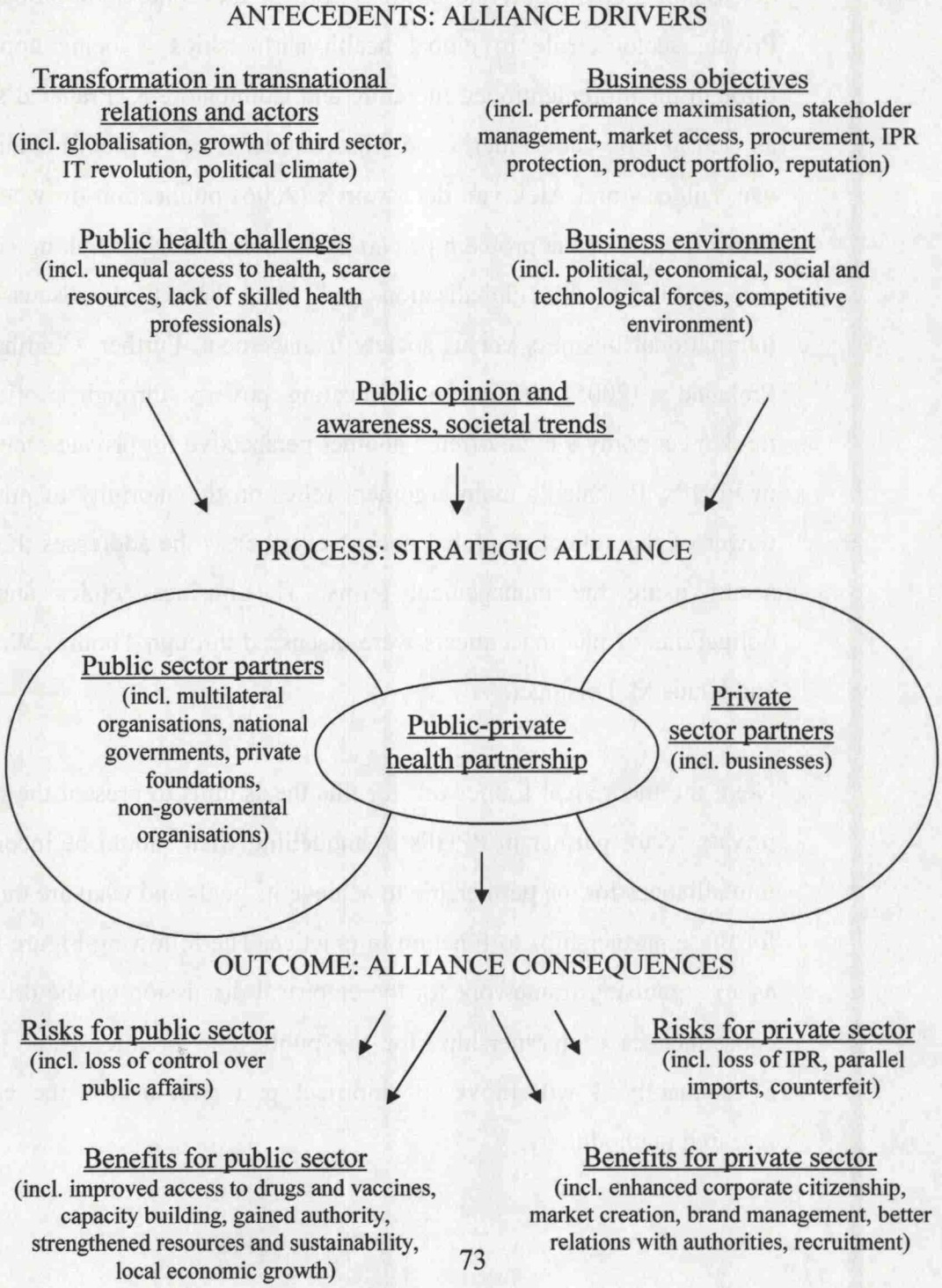
In order to analyse the role of private sector partner in public-private partnerships in access to health products, this thesis relates to a collection of theories on alliances in public-private context. In the literature review, I firstly presented multi-stakeholder alliances and sought to identify what the success factors for these collaborations are. More specifically, Jakki Mohr's and Robert Spekman's study (1994) on characteristics of partnership success and James E. Austin's work (2000a, 2000b, 2004) on strategic alliances between non-profits and businesses guided the discussion. The research was then narrowed down studying the pedigree and functioning of public-private alliances. The literature revealed that PPPs are being regarded as a cost-efficient and effective instrument for the implementation of public policy and thus, they have also become a frequently used approach in the provision of health care. Furthermore, I discussed Emanuel Savas' work on privatisation (2000), that gave perspective on PPP drivers and Michael Spackman's (2002) research on PPPs in United Kingdom, which has nearly 30 year history in using public-private partnership model in organising so-called public services.

Subsequently, the discussion focused on partnerships active in the health sector in access to health questions in least developed countries. However, it is important to note that the scientific literature on public-private health partnerships for the large part concentrates and one can almost say, limits itself, to initiatives that target to foster research and development for neglected diseases. Nevertheless, Michael Reich (2000) and Kent Buse and Gill Walt (2002, 2000) are leading researchers in access to medicines questions for developing countries and their reflections frame this study next to public health expert Roy Widdus' (2005) work.

The main contributing theories draw from corporate social responsibility discussion studying private sector's role in the context of globalisation. Private sector's role in global health partnerships is being approached through the aforementioned literature and Coimbatore K. Prahalad's (2005) as well as Rob van Tulder's and Alex van der Zwart's (2006) studies. Rob van Tulder's and Alex van der Zwart's (2006) publication on whether the firms are part of the problem or part of the solution when linking corporate responsibility and globalisation led the theoretical discussion on international business versus society management. Further, Coimbatore K. Prahalad's (2005) theory on eradicating poverty through profits using market economy's logic offered another perspective for private sector's role in PPHPs. Prahalad's main argument relies on the enormity of purchasing power of the collective global poor. Nevertheless, he addresses the private sector using the management terms. The business ethics and moral obligations of pharmaceuticals were discussed through Thomas W. Dunfee and Klaus M. Leisinger.

Next, the theoretical framework for this thesis aims to present the role of a private sector partner in PPHPs by modelling what should be incorporated into alliances for the partnership to achieve its goals and what are the drivers for these partnerships to function in practice. The following Figure 8 serves as an organising framework for the empirical discussion on the drivers and consequences of partnerships for the public and private sector partners. Subsequently, I will move to empirical part and discuss the empirical research methodology.

FIGURE 8: THEORETICAL FRAMEWORK. PARTNERSHIP DRIVERS AND CONSEQUENCES.



4 Methodology of the empirical research

This thesis aims to study the role of private (for-profit) sector partner in public-private health partnerships in bettering access to health in least developed countries. The sub-problems seek to identify the success factors in multi-stakeholder partnerships in general and the challenges in expanding drug and vaccine access in developing countries. To understand better the role of private sector partner, I ask how the private sector partner can assist in bettering the access and why do private sector enterprises want to partner a public-private health partnership and better the health in developing countries. These research questions seek in-depth understanding of the behaviour of private sector partners in PPPs and thus, I have decided to approach the phenomenon using qualitative research methodology.

As Moisander and Valtonen (2006, ix) suggest, qualitative research is a heterogeneous methodological field and instead of being a clearly defined empirical research approach, it refers to a variety of philosophical assumptions, which are all established on more or less different epistemological, ontological and methodological commitments. Further, since qualitative methods are understood differently within different rationale and frameworks, one should discuss them only within a specific conceptual framework (Ibid). Scientific management literature discusses public-private partnerships in the context of strategic alliances, which frame, respectively, this paper. To continue, typical qualitative methods include single- or multiple-case studies, experiment, survey, history and ethnography, to be used for different research strategies (Yin 2003, 1; 5; 12). The single case study was found most suitable research method for this

study and this choice will be further discussed in detail in the following chapter.

4.1 Single case study

The case study is a commonly used qualitative research method in social sciences in political and economic sciences (Yin 2003, 1). The literature on public-private health partnerships equally commonly studies the phenomenon through short, descriptive cases (see for example Curtis et al. 2007; Garrett 2007; Lucas 2002, Muraskin 2002). According to Yin (2003, 2), desire to understand a complex social phenomena and retain holistic and meaningful features of real-life events asks indeed for a case study research strategy. Further, case studies are the preferred strategy when "how" or "why" questions are being posed about a contemporary set of events, over which the researcher has little control over (Ibid, 2; 9). Taking into consideration the research questions for this thesis (see chapter 1.3), case method can be seen as an appropriate choice. Yin (Ibid, 9) moreover recommends conducting a preliminary literature review on the topic prior to collecting and analysing the empirical evidence. The section 2 of this paper discusses the literature on private sector's role public-private health partnerships. Finally, Yin (Ibid, 13), states that case studies have distinct advantages when contextual conditions are seen fundamental to the study. This research aims to look at the research subject in a broad manner confirming the choice of method.

In the context of master's thesis, conducting the study focusing on one global public-private health partnership was found to be of reasonable and

sufficient scope. Thus, a single, retrospective case study was chosen as the research method for this thesis. More specifically, it was decided to study Global Polio Eradication Initiative (GPEI) that targets to eradicate poliomyelitis by extending access to polio vaccines worldwide. The case will be presented in detail in the section 5. Briefly, GPEI was chosen as the principle research subject as it is being regarded as the largest global public-private health initiative to date and has successfully contrived to eliminate polio from majority of countries offering a possibility to identify best practices in the field. In addition, the PPHP's achievements and structure are well-documented. The initiative's most significant private sector partner is the world's third largest pharmaceutical Sanofi Aventis' vaccine unit Sanofi Pasteur (Marketline 2008), to which I had access during my studies of Health Economics in France. Sanofi Pasteur is the world's largest vaccine manufacturer with the widest portfolio of poliomyelitis vaccines (MarketResearch.com 2008, Bompart 2006). However, the study was conducted solely for academic purposes, and the researcher did not receive funding from the case company. Thus, the case study focuses on Sanofi Pasteur's role in Global Polio Eradication Initiative. The method of implementation for the empirical research was a personal interview. This thesis was realised during a two-year process commencing with the data collection in Spring 2006 and was finalised during an intensive six-month period in Spring 2008. The data collection and applied analytical methods will be presented in detail in the next chapters.

4.2 Data collection

In regards to research questions, in-depth personal interviews next to analysis of secondary data were seen as the most suitable approaches to support the information collection for this study. Yin (2003, 14) states that case inquiry is to rely on multiple sources of evidence. Thus, the secondary empirical data was manifold and lays the foundation for the empirical study. It was gathered from secondary sources such as published GPEI's annual reports and other GPEI evaluation reports, United Nations and World Health Organisation's documentation, pharmaceutical industry's annual corporate responsibility reports as well as lecture material distributed within the ESSEC Health Management Institute and in international conferences on health and vaccines.

The primary empirical data was collected in Paris, France on 17 May 2006 through one in-depth personal expert interview within Sanofi-Aventis and in addition, two other experts, Vice-President Pascal Perrin of Sanofi Pasteur's international publicly funded market department and Director Rene Cazetien of Sanofi-Aventis corporate drug access, were interviewed during telephonic and lecture discussions and e-mail contacts on 5 May and 16 May 2006 in Paris, France. The in-depth interview was semi-structured and open-ended. It was conducted directly with the respondent in a face to face discussion and the duration of the interview was 90 minutes. The interviewee spoke rather freely, giving 2 to 5 minutes long answers and the interviewer's role was only to guide the discussion. The interview was recorded and later transcribed word-to-word into a 16-page document. The interview was conducted in English in order to enable direct quotations.

The choice of the interviewee was made according to his experience in public-private health partnerships and the degree of his responsibility over the company's participation and role in the Global Polio Eradication Initiative. Several people in Sanofi-Aventis corporate headquarters' named Dr. Francois Bompart as such a key person and he agreed to be interviewed. Doctor Bompart is currently Associate Vice-President for Medical Affairs responsible for Access to Medicines projects and Director of Impact Malaria Program at Sanofi-Aventis headquarters (Paris, France). From 1998 to 2006 he was Vice-President for Global Medical Affairs at Sanofi Pasteur vaccines (Lyon, France) and was responsible for the company's partnership with Global Polio Eradication Initiative. His motivation to participate in the study was both professional as well as personal as he expressed content with sharing his knowledge. Finally, due to the Francois Bompart's profound knowledge of Sanofi Pasteur's participation in GPEI and experience in the health access questions in developing countries, one in-depth interview was found adequate to complete the secondary sources.

Prior to preparing the interview, I studied the epidemics of poliomyelitis, history, structure and achievements of Global Polio Eradication Initiative, recent newspaper articles on the matter and most importantly Sanofi Pasteur's documents of its involvement in polio as well as in GPEI and Sanofi-Aventis' Corporate Sustainability Report. The interview was structured so that firstly the interviewee's background and global vaccine market were being discussed. Secondly, the interview moved to examine the drug and vaccine access in pharmaceutical industry in general and further to the functioning of Sanofi-Aventis' and Sanofi Pasteur's access to health

departments, their mission, strategy and future vision. Thirdly, the poliomyelitis epidemiology, vaccine R&D and product portfolio were discussed and finally, fourthly, moving to the Global Polio Eradication Initiative. GPEI's significance, current stage, encountered challenges and future were opened up. Fifthly, Sanofi Pasteur's role in GPEI was examined: history, current activities, future and the learning process. Sixthly, the interview terminated with general discussion on the role of public-private health partnerships in global health access and the relationship with their multiple stakeholders. The posed questions are attached to this thesis as Appendix 1. The analysis and case study report were finalised in Spring 2008.

4.3 Analysis method and interpretive framework

Empirical research, by definition, gives access to the phenomena, and examination of the data enables understanding of the research subject (Moisander and Valtonen 2006, 102). In this study, the data focused on finding out what has, retrospectively, been the private sector partners' role in the Global Polio Eradication Initiative. More importantly the attention of the empirical analysis was directed at vaccine manufacturer Sanofi Pasteur's role in the initiative. The discussion and analysis aimed to examine why Sanofi Pasteur wanted to partner GPEI and what is the role of Sanofi Pasteur in GPEI.

So although empirical research analysis is data-oriented, Moisander and Valtonen (2006, 99) confirm that findings do not emerge from the data in any theory-free manner. A scientifically grounded interpretive framework

always leads the analysis, referring to a set of principles that describe the perspective and practices for the process of interpretation (Ibid, 99; 103). The idea is first to identify a particular theoretical perspective (Ibid, 104). In this study the interpretive framework arises from strategic alliance literature within the discipline of economics. The theoretical framework (as shown in chapter 3), provides theoretical constructs and structures the empirical analysis. The analysis in chapter 5.1.3 thus, firstly concentrates on the antecedents of GPEI partnership, in other words the private sector's alliance drivers. Secondly, the process of strategic alliance itself is being analysed and thirdly, the outcome, meaning the consequences of the partnership for Sanofi Pasteur and GPEI.

To continue, literature plays a significant role in qualitative research (Moisander and Valtonen 2006, 104). Thus, the data analysis (in chapter 5) is being discussed in view of the literature review and classified under the three events of antecedents, process and outcome. This study acknowledges that the primary role of theory is to provide perspectives to the data, to open it up, not to test it. Theory is viewed as a source of inspiration as I share Moisander and Valtonen's (2006, 99) view that encourages the researcher exercise intuitive and creative capabilities within a particular interpretive framework. Finally, I have adopted writing and data sorting techniques to support the interpretive empirical analysis. I have not used any particular coding mechanisms, but instead structured ideas by writing and grouping the data from primary and secondary sources, in order to enable rigorous analysis that is well grounded in the data as Moisander and Valtonen suggest (2006, 106). Next, the quality of this study will be evaluated.

4.4 Quality of research and analysis

According to Yin (2003, 33-34), the quality of empirical social research methods, such as case studies, can be assessed by testing construct validity, external validity and reliability. In addition, a fourth test, internal validity, is being used to evaluate causal or explanatory studies (ibid). This thesis is descriptive by nature and thus, testing internal validity is not relevant. However, some critics present that validity and reliability refer to an ideal of an absolute science (such as mathematics) and thus, are not pertinent in evaluating qualitative research methods. When judging the quality of analysis method, Moisander and Valtonen (2006, 148) highlight the need to assess theoretical insightfulness and relevance as well as the sensitivity of the analysis to the phenomenon in question. Noting that no single, fixed criteria exists to determine the correctness and goodness of a study, I have chosen to evaluate the quality of the research and analysis methods of this study through construct and external validity, reliability, theoretical insightfulness and relevance, which will respectfully be next discussed.

Construct validity – Construct validity tests that correct operational measures have been established for the concepts being studied (Yin 2003, 34). This test is particularly challenging in case study research as researcher easily fails to use subjective judgments in collecting the data (Ibid, 35). To increase construct validity, one can establish a chain of evidence or have a key informant to review the draft case study report (Ibid, 36). The construct validity is assured in this study by the use of multiple sources of evidence during the data collection.

External validity – External validity signifies the ability to generalise the results of a singular study beyond the immediate case study. Commonly, single case examinations have been regarded poor basis for generalisations and the external validity issue has been a major challenge for the method (Yin 2003, 37). Moisander and Valtonen (2006, 28) argue that external validity refers to extending the study results from a small sample populations to the population at large and thus, is better suitable for assessing quantitative research methods. However, in the context of a case research, the researcher aims to generalise a particular set of results to some broader theory through analytical, not statistical, generalization (Yin 2003, 37). By contributing to the discussion on strategic alliances in management literature and more specifically on Austin's (2000a) broader theory on the success drivers in partnerships between nonprofits and businesses, this thesis seeks to secure the external validity. To test external validity, one should test the results of a given study against another case research (Yin 2003, 37). No similar case study on the vaccine manufacturers' role in a public-private health partnership has been conducted to my knowledge and thus, testing the results of this study against another case is left as an opportunity for further studies.

Reliability – Reliability usually deals with replicability, the degree to which the findings of a study are independent of accidental circumstances of their production (Kirk and Miller in Moisander and Valtonen 2006, 27). The goal of reliability is thus, to minimize the inaccuracy and biases in any given research by conducting it in a systematic and rigorous manner (Yin 2003, 37; Moisander and Valtonen 2006, 28). A good rule for doing case research is thus, to conduct the study so that another researcher could later repeat the

actions and arrive at the same conclusions (Yin 2003, 39). A prerequisite for enabling an auditor to repeat an earlier case study is to document the procedures followed in the earlier case (ibid, 38). Recommended by Yin (2003, 101-102), to increase the reliability of the entire case study, a case study database was developed for the empirical research conducted in this thesis. In real terms, a case study database consists of organizing and documenting the empirical data in two separate collections: 1) the original, raw database and 2) the actual report of the researcher (ibid). In the context of this thesis, the previous are synonymous with the due recording as well as transcription of the personal interview and the latter with the thesis chapters 5 and 6 on empirical research, discussion and conclusions. The database can then be the subject of independent, secondary analysis (Yin 2003, 101).

Theoretical insightfulness and relevance – A good data is relevant in respect to research questions and analytic methods applied (Moisander and Valtonen 2006, 148). An insightful analysis challenges existing body of knowledge being both theoretically sophisticated and empirically well grounded (Ibid, 99; 149). The openness of the interviewee in regards to pharmaceutical industry's participation in health access and their motives in doing so, confirms the sensitivity and insightfulness of the primary data in this study. According to Moisander and Valtonen (2006, 149), situating the analysis tightly to the existing literature, the researcher shows its theoretical relevance. Thus, next to linking this thesis into the scientific literature, I have sought to ensure it's the relevance to the social policy-makers and market practitioners by connecting the text to the current discussion in the field. Finally, I have paid attention to address the subject in a focused manner. Next section is dedicated to the empirical research.

5 Empirical research

Drawing on the primary and secondary empirical data, this section discusses and analyses the case of Global Polio Eradication Initiative (GPEI) and private sector vaccine manufacturer Sanofi Pasteur's role in the initiative. However, firstly the vaccine market and industry will be briefly introduced in order to give an insight to the sector under study. Secondly, the case of GPEI will be presented with a special attention on the stakeholders and private sector's participative role. Thirdly, the data and findings on Sanofi Pasteur's role in GPEI will be presented and then respectively analysed.

5.1 Vaccine market and industry structure

Progress in vaccine development, combined with improved sanitation and antibiotics, has greatly reduced the fatal threat of infectious diseases, historically ranked as the leading cause of mortality in the world (Salinsky and Werble 2006, 3). Vaccines provide an extremely cost-effective technology for preventing and treating life-threatening diseases and averting potential health spending (Danzon, Pereira and Tejwani, 2005, 706). Nevertheless, the global vaccine market was until recently thought as a pharmaceutical backwater with low margins and growth rate, representing only 1.5 % of the total pharmaceutical market (Salinsky and Werble 2006, 12). But the situation has changed rapidly. Global vaccine sales doubled in the 1990s, from USD 2.9 billion in 1992 to more than USD 6 billion in 2000 due largely to the worldwide effort to eradicate polio and the introduction of new, higher priced paediatric vaccine products in industrialised countries (Salinsky and Werble 2006, 12; Danzon, Pereira and Tejwani, 2005, 706). The market is currently growing at the rate of 16.5 %, much faster than the

traditional pharmaceutical market, and expected to reach USD 21 Billion by 2010 (MarketResearch.com 2008).

The vaccine sector is divided into two areas: the paediatric basic vaccines such as polio / measles and adult influenza and therapeutic vaccines such as hepatitis / yellow fever (MarketResearch.com 2008). The paediatric vaccine market has in 1990's further separated into private and public markets, where the private market is a new area of pricy "optional vaccines" (Ibid). Bompart (2006) explains that "the vaccine industry decided to take a classical pharmaceutical marketing approach by going to paediatricians and convincing them that they should tell and prescribe the vaccine to parents who can afford it". In the public market the vaccines are purchased and delivered by governments. Further, the characteristics of vaccine market include price stability, high entry barriers due to high set-up costs of manufacturing facilities, and limited possibility to inventories due to the perishable nature of vaccines (Salinsky and Werble 2006, 13-17). Competitive pressures arise from the high fixed costs that represent circa 85 % of total costs and drive manufacturers maximise capacity to benefit from economies of scale (Ibid). According to MarketResearch.com (2008), the current business opportunities lie in contract research, India and China (future hub for paediatric vaccine manufacturing including poliomyelitis), and vaccine development for influenza, cancer and addiction. To continue, the challenges for the industry include extensive R&D costs, lack of infrastructure for vaccine trials, tight supply and inflexible manufacturing capacity (Ibid). The principle drivers for the vaccine market are its potential to prevent diseases next to higher margins, increased funding from governments and NGOs, favourable government regulations, increasing

population in developing countries, disease awareness and blockbuster potential of new vaccines. In 2000, vaccine manufacturers spent about 16 percent of sales on research and development, a comparable ratio to that spent by the pharmaceutical industry (Danzon, Pereira and Tejwani, 2005, 706). The leading vaccine manufacturers are being listed in the order of importance in the below figure 9.

RANK	VACCINE MANUFACTURER	COUNTRY OF ORIGIN
1.	Sanofi-Aventis (Sanofi Pasteur)	France
2.	GlaxoSmithKline	United Kingdom
3.	Merck & Co.	USA
4.	Novartis	Switzerland
5.	Wyeth	USA

FIGURE 9: LEADING COMPANIES IN VACCINE INDUSTRY.

Source: MarketResearch.com 2008.

All Top 5 companies in vaccine industry locate in Northern hemisphere in US and Europe. The leading manufacturer Sanofi-Aventis was created as a result of the merger of Aventis and Sanofi-Synthelabo in 2004 and recorded EUR 28.1 billion of revenues (annual growth -1.1%) in 2007 (Sanofi-Aventis 2008a). The vaccine division Sanofi Pasteur accounted for 10 % of the group's revenues, totalling at EUR 2.8 billion (with annual growth of 14.5 %) and according to current CEO Gerard Le Fur has confirmed its strategic importance for the group (Ibid). Largest growth was realised in

Latin America and South-Asia, outside of Europe and USA, company's current key market areas (Ibid). In terms of revenues, polio-pertussis-hib combination vaccines represented in 2007 the most important product group to Sanofi Pasteur with EUR 660 million in revenues (growth rate 5.1%) (Sanofi-Aventis 2008b). The company holds market's largest polio vaccine portfolio, manufactures oral polio vaccine (OPV) and is currently the sole supplier of inactivated polio vaccine (IPV) to the UN for developing country use (WHO 200d, Bompart 2006, Perrin 2006).

So, the preventive and collective health benefits of vaccines create a remarkable public interest in ensuring their availability (Salinsky and Werble 2006, 3). Thus, one of the biggest challenges in ensuring vaccine coverage is the wide gap between the developed and the developing world in terms of accessibility and quality of vaccines. Key markets for vaccine manufacturers are Northern industrialised states in United States, Europe and Japan as well as emerging economies of China, India and Brazil (MarketResearch.com. 2008). In Europe, Japan, and other industrialised countries, local governments play a dominant role in vaccine procurement and price setting, as they do for most pharmaceuticals and health services (Danzon, Pereira and Tejwani, 2005, 709). On the contrary, for developing countries the Unicef serves as the procurement agency and accounts for basic paediatric vaccines including polio for 40 % of the global volume and 5 % of the market value (Ibid). Unicef has changed its purchasing strategy spreading its demand across several suppliers, to keep them all in the market and defend against supply interruptions (Ibid). Given the tight budget constraints and the consequent focus of Unicef, these markets and products offer limited market appeal for businesses and thus majority of the supply to

Unicef arrives today from Indian, Indonesian, and other developing country suppliers, rather than from multinationals (Salinsky and Werble 2006, 12; Danzon, Pereira and Tejwani, 2005, 709).

Bompart (2006) confirms that the inflexibility of vaccine manufacturing slows down the access in least developed countries. He continues: "Producing chemical compounds is pretty flexible ... if you want to produce ten times more pills on a short notice, it's possible. For vaccines it's much more complicated. You have enormous constraints and manufacturing tools are very hard to increase capacity because of regulatory constraints. If you want to produce generics of Hepatitis B vaccine, you have to have your plant validated exactly as the original one and it's not going to work. For chemical manufacturing centre all you have to prove is that you are chemically equivalent and bio-equivalent to the original one. The constraints are therefore much stricter for vaccines. This is one of the reasons why vaccines are not available on a very large scale from the discovery. It's technically so complex to manufacture. And that's why you don't have generics in vaccines and only a few global manufacturers".

Next the case of Global Polio Eradication Initiative for this empirical study will be briefly presented. I will begin by introducing the initiation of GPEI, its stakeholders and then, turning to examine the private sector's role in the public-private health partnership of GPEI.

5.2 Case: Global Polio Eradication Initiative and Sanofi Pasteur

World Health Organisation (WHO) successfully concluded eradication of smallpox in 1979. Inspired by that success, WHO launched in 1988 the largest global public health partnership ever, the Global Polio Eradication Initiative (GPEI) (Global Polio Eradication Initiative 2007, 4-5). The initiative targets to eradicate polio worldwide and end the need for immunisation against the disease (Ibid). According to World Health Organisation's epidemiological records (2008), poliomyelitis is a highly contagious virus, but 90% of infections are totally asymptomatic. Less than 1% of cases lead to muscle weakness and irreversible paralysis, usually in the legs, however, among those paralysed, 5% to 10% die when their breathing muscles become immobilised. No cure but two preventive poliovirus vaccines are available. Firstly, the oral poliovirus vaccine (OPV), also called the Sabin vaccine is a live-virus vaccine taken through mouth and was developed in 1962. Secondly, the inactivated poliovirus vaccine (IPV), also called the Salk vaccine, was developed in 1955 and it is a killed vaccine that is administered by injection. Both produce immunity in over 95% of people.

At the inception of GPEI, wild poliovirus was endemic in more than 125 countries paralysing globally over 1000 children every day. Today, owing to GPEI and its stakeholders' efforts, the disease is almost eliminated. Below the Figure 10 shows the drastic drop in the number of cases of polio since the launch of GPEI.

YEAR	POLIO CASES
1988	350 000 (est.)
1999	7 141
2000	2 979
2002	1 918
2004	1 225
2006	1 997

FIGURE 10: EVOLUTION OF POLIOMYELITIS CASES IN 1988-2006.

Source: Polio Info 2006b

According to Polio Info (2006b), the recent increase in the number of cases can be explained mainly by limited vaccination campaigns in India and Nigeria that are met with resistance from the local population. From these countries, the virus began to spread again into countries where it had already been eliminated. In 2004, a new plan was unveiled to immunise 250 million children in the remaining polio-endemic countries to eradicate finally the disease and the circulation of the virus has been stopped again. According to Bompart (2006) the troubles in Nigeria were origin of cultural and religious misunderstandings. "In Northern Nigeria some religious leaders, who had strong anti-Western beliefs, mixed their conviction against the West (and spread a rumour of polluted, unsafe vaccines). ... There were some political motives hidden behind religious motives. This was solved as Nigeria was guaranteed that the vaccines used will come from a Muslim country, the vaccines from Indonesia. It is a difficult area to work. It is very populous

and not very well organised, so the rumour (about unsafe vaccines) was very detrimental." However, according to Bompart (2006), the biggest challenges in GPEI are not political or cultural barriers but "the main thing is the fatigue. You can get people involved two or three times but keeping up the enthusiasm is the most difficult. To me, I would say it is the biggest problem. ... to ensure funding is also difficult. Funders become also tired of year after year something yet to participate in a campaign and yet an extraordinary effort."

According to Bompart (2005, 163) "for ultimate success three primary objectives of the GPEI must be met: certification of polio eradication, containment of preserved virus stocks and discontinuation of polio vaccination". However, he (2006) highlights in the beginning of the interview that the task of meeting these objectives has been complicated by two events in particular. Firstly, it has been found out that the oral polio vaccine's (OPV) instability is at the origin of some new virus transmissions causing so-called vaccine-derived polio viruses (VDPV). It is possible for a healthy person to catch the virus through OPV, carry the virus and transmit it forwards unknowingly. This can be of great concern in the developing world where the immunisation is not complete. Thus, extending the use of more efficient IPV vaccines into the developing countries would be crucial. Secondly the financial aspect, IPV vaccines are very costly and the donations remain insufficient. Current price range for one monovalent oral polio vaccine (OPV) through Unicef varies according to volume and competitor's capacity between USD 0,11 and USD 0,14 at no-profit-no-loss in multidosage vials (lots of 20 dose vials) (Perrin 2006). No price comparison can be made with the high-income countries as OPV vaccines

are no longer distributed in industrialised countries. All high-income countries vaccinate children through combined inactivated polio vaccine (IPV), which is currently 10 to 15 times more expensive than the OPV (Bompart 2006, Perrin 2006). Combined paediatric vaccines enable to immunise against up to six different common viruses at one injection, including tetanus or diphtheria. According to Perrin (2006), developed countries have adopted the IPV due to its ability to vaccinate against multiple viruses, and for its safety compared with OPV. Currently combined IPVs are not even offered to developing countries (at cost) due to high manufacturing cost exceeding LDCs ability to pay (Ibid). These challenges have led to a rethink of the idea that vaccination against polio could stop one day and a global eradication could be achieved (Bompart 2005, 163).

5.2.1 Stakeholders

GPEI is a public-private health partnership that is managed and coordinated by the initiative's founding members World Health Organization (WHO), Rotary International, the US government related Centers for Disease Control and Prevention (CDC) and United Nations Children's Fund (Unicef). in addition, the initiative cooperates with a large number of private and public sector organisations. Sanofi Pasteur is the oldest and largest corporate partner to GPEI. Next, the roles of different stakeholders will be presented.

Multilateral organisations (MLOs) – GPEI is coordinated by the World Health Organization (WHO). Some 3,000 people work full-time for the eradication campaign, which is based at the WHO's Headquarters in Geneva. Unicef purchases a large portion of polio vaccines and organises the

logistics for the delivery providing the means to ensure the cold chain is respected. Vaccines go through its warehouses in the Netherlands before being shipped to the LDCs where they will be administered. In addition, Unicef trains healthcare personnel who take part in immunisation and campaigns to raise locals' awareness about polio. The funding of MLOs is being collected from the organisations' member states as well as private international donors. (Polio info 2007)

National governments and health authorities – Local governmental offices and health authorities ideally use national tax funds to purchase vaccines, provide infrastructure and inform population about national immunisation days (NIDs) in use in LDCs. MLOs usually advice and assist governments in these actions. The U.S. Center for Disease Control and Prevention (CDC) provides technical assistance, in particular for setting up polio surveillance networks and reference laboratories (Polio info 2007).

Non-governmental organisations (NGOs) – Global Polio Eradication Initiative's predecessor PolioPlus campaign was commenced by Rotary International, nearly eliminating polio from the Americas (Global Polio Eradication Initiative, 2006a). When the WHO decided to become involved in polio eradication, it continued the campaign. At the time, Rotary made a commitment to raise a total of 500 million dollars in funding by 2005 and more than one million Rotarians throughout the world have participated directly in the campaign (Ibid). In the "field" in LDCs, the international and local NGOs assist in raising funds and organising prevention campaigns.

Private foundations – New private not-for profit partners have joined the initiative since 2000, including the Bill and Melinda Gates Foundation, which donated USD 50 million, bringing its total commitment until 2008 up to USD 110 million (Polio info 2007). Through their own private philanthropic foundations some celebrities have become ambassadors of polio eradication including actors Roger Moore and Mia Farrow, and entrepreneur Ted Turner, also President of the UN Foundation (Ibid).

Private (for-profit) sector organisations – Within the context of GPEI, the private sector is mainly represented by vaccine industry. The involvement of polio vaccine manufacturers is highly critical to the initiative as due to the vaccine manufacturing complexity and inflexibility there are only a few players in the world who are able to guarantee an adequate supply of polio vaccines. Sanofi Pasteur is the world's leading institution in poliomyelitis immunisation and the longest standing corporate partner to the GPEI having donated vaccines and finances, practised preferential pricing and given medical expertise to the partnership (Bompart 2006). In addition, vaccine manufacturers Wyeth, Novartis, GlaxoSmithKline and Bayer have made minor contributions to the eradication campaign (Global Polio Eradication Initiative, 2008). The manufacturers sell polio vaccines at cost to GPEI and explain their motivation by solidarity viewing it as part of their corporate responsibility, sustainable development or corporate citizenship programs (GlaxoSmithKline 2008, 45; Bompart 2006). According to GPEI's Annual Report 2005 (2006, 11) the private sector funding is 18% of the total budget.

Since 1988, GPEI has attracted a total international investment of USD 5.3 billion. The initiative has been primarily funded by G-8 and national

governments, the WHO, Rotary International, the US Centers for Disease Control and Prevention (CDC) and Unicef (GPEI 2008a). The Figure 10 shows the GPEIs capital inflow revealing the financial importance of separate stakeholders.

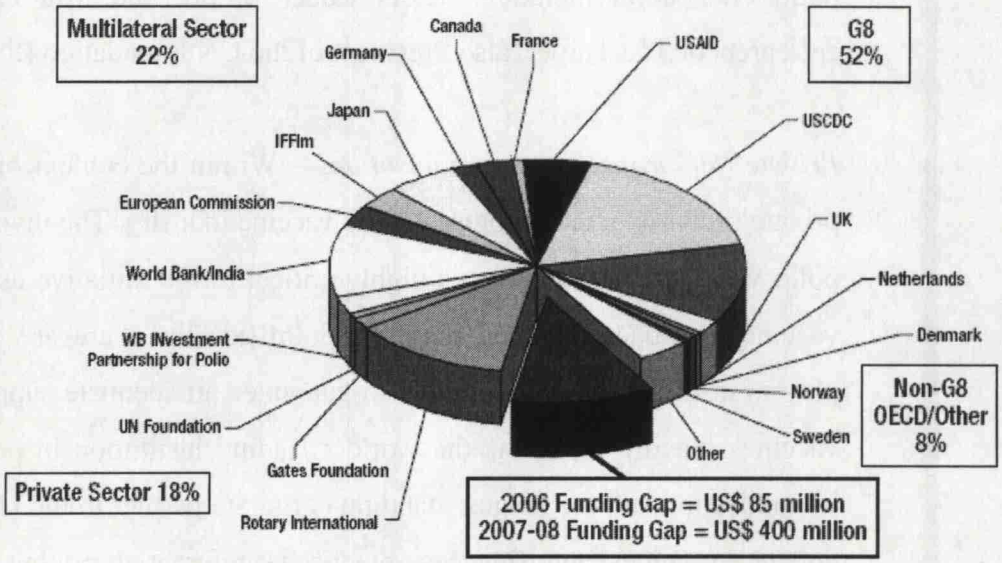


FIGURE 11: FINANCIAL CONTRIBUTIONS TO GPEI IN 1998-2008.

Source: Global Polio Eradication Initiative. (2006). Annual Report 2005.

5.2.2 The role of private sector

According to WHO's Donor Contributions to the Global Polio Eradication Initiative records (2008), Sanofi Pasteur has been the most important corporate contributor bringing in 1985-2005 about USD 17,7 million whereas Wyeth has contributed USD 1,9 million to support the Global Polio

Laboratory Network, a key component of the Global Polio Eradication Initiative (Polio info 2007). The laboratory network is made up of three regional and 13 national laboratories that analyse polio cases and provide surveillance information for African and Eastern Mediterranean countries (Ibid). Wyeth continues contributing to the GPEI. In 1996, Chiron Vaccines, now Novartis Vaccines and an OPV manufacturer joined GPEI. Through 2006, Novartis has donated 33.3 million doses and invested in the specific development of monovalent polio vaccine (mOPV) (Global Health Progress 2008). GlaxoSmithKline has mainly been in a vaccine supplier's role (Polio info 2007). In Thane, India, Bayer HealthCare donated enough polio vaccines to immunise 170,000 children, an initiative that helped the WHO program defeat polio in the region (Global Health Progress 2008). Interestingly, another major private sector partner DeBeers diamond company donated USD 2.7 million for the initiative (Global Polio Eradication Initiative, 2008), which could be related to company's diamond sourcing in polio endemic areas. The findings on the Sanofi Pasteur's role in GPEI, will now be presented using both the secondary and primary empirical data.

5.2.3 Sanofi Pasteur's drivers and role

This chapter discusses Sanofi-Aventis' policy and drivers in public-private health partnerships in drug and vaccine access and in particular, its vaccine division Sanofi Pasteur's role in Global Polio Eradication Initiative.

5.2.3.1 Sanofi Pasteur's drivers to partner GPEI

According to Bompart (2006), Sanofi-Aventis' drug access department was established in 2002 by the company's former CEO Jean-Francois Dehecq. His motivation was two-fold. "Firstly, pharmaceutical industry has a bad image. People have a problem with industry making excessive profits on people's health. In general health and profits don't go well together. The right to a good health is seen as given and therefore one should not make any profits on it." Unfortunately many are unaware that pharmaceutical innovations and new therapies are developed within private pharmaceutical profit-making companies. Secondly, the multinational pharmaceuticals "have only access to 10-15% of population in the poorest developing countries. We really don't know who are the other 80% of the population. We have no access to them. We try to understand how and what we could provide them by using our know-how, which are the drugs." Rene Cazetien (2006) of Sanofi-Aventis puts it even clearer saying that the "future of the company lies in developing countries where locates 80% of the world population that have no access to drugs and vaccines".

Bompart (2006) explains further that Sanofi-Aventis, being a R&D-based pharmaceutical, has an obligation of ensuring that the vaccines are being used properly and reach the people who need them. It is a real solution, not just words or just for the image. "If this (access to medicines department) was only about public relations, we could do it much more cheaply. We could make a big donation to a NGO and have CEO Jean-Francois Dehecq to fly in an African village and take a few pictures of Dehecq with some kids, you know. And that would make a good brochure. But that is not at all

our intention. We really want the drugs to reach people, we really want to make an impact".

According to Dr. Bompart (2006) whole pharmaceutical industry is only now discovering the issue of access to medicines, which was originally raised up by the HIV/AIDS activist movement in the mid-1990. Also, a clear change can be noted in the attitude of Sanofi-Aventis' staff in regards to access to medicines, which has become one of the more popular departments to work in since its establishment in 2002 (Cazetien 2006). However, the access department's small team of 33 experts is mostly in a coordinative role taking advantage of the large internal resources of the company e.g. in industrial operations, in regulatory affairs, in clinical development as well as outside partners to enable efficient response and participation in initiatives (Bompart 2006). Access to vaccines and the tier pricing approach in selling vaccines to LDCs have on the contrary been an intrinsic part of the vaccine world and also of Sanofi Pasteur vaccine division's strategy for the past 30 years (Cazetien 2006). Thus, Sanofi Pasteur has no separate access to vaccines department but a business division called IFPM, the internationally funded public market, whose mission is to supply international organisations and governments (Ibid).

The way Sanofi-Aventis targets to ease access to health products in LDCs is four-fold. Firstly, the company aims to provide medicines as cheaply as possible by reducing the total costs of goods through industrial streamlining. "This is because we want to do it and because we also have plans in the developing world." Secondly, the firm invests in R&D efforts and in improving current therapies. Thirdly, they are prepared to develop drug

formulations according to specific needs and requirements in LDCs. Fourthly, the company shares its expertise on public health matters pro bono with international organisations and governments and also, provides information, prevention and education for developing country population. Bompart (2006) stresses that providing the drug is not enough. "One principle, what is very near to Jean-Francois Dehecq's heart is that we are not a foundation, we don't bring in money. What we bring in is what is unique to the pharmaceutical industry, the know-how. ... how to develop a drug and register it, manufacture and distribute it. This is what the pharma industry knows to do and we are the only ones. ... Therefore we (the drug access department) are not a foundation but an integral part of the company. And of course we work a lot with outside partners and NGOs, WHO, Global Fund." In the future Sanofi-Aventis drug access department plans to start up new health initiatives and partnerships, and bring concrete new products to the market.

Bompart (2006) discusses finally the role of public-private health partnerships in drug access saying that one side is not all. "There are times when it is the best solution and there are situations when it is not. We don't go for PPPs for every single initiative, ... (some initiatives) we feel are handled more simply just on our own." When asked, when the PPHP is not the best solution, he continues "When it comes too early, the discovery efforts… The belief of Sanofi-Aventis is that it is better for us to go alone because we can make quicker decision as we don't have to consult many people. The early stages we run in our own and if we are convinced ... that we have a good candidate in our hands, then we look for partners."

Sanofi Pasteur's decision to take part in polio prevention dates back to Connaught Laboratories in Toronto, today Sanofi Pasteur Canada, that played a visible role already in 1954 in the initial development of injected polio vaccine (IPV) by producing the viral fluids for the first vaccine trials (Polio Info 2006a). Further, the Mérieux Institute, today Sanofi Pasteur France, developed the techniques that led to industrial vaccine production (Ibid). Bompart (2006) confirms that Sanofi Pasteur has been involved and supplied the vaccines with the Global Polio Eradication Initiative from the beginning of the initiative in 1988. Officially however the company received a corporate partner "label" only in 1997 when it started making extra donations.

Today, Sanofi Pasteur is first of all morally committed to partner WHO in GPEI (Perrin 2006). The company feels very much part of the GPEI partnership and according to Bompart (2006): "Because it is a strategy about to stop vaccinating, whether it will ever be possible, we are definitely on board with WHO. We are really very much part of the partnership with WHO so we are in this for the long time. It is not just because this would be a possibility to us to sell the vaccines but because we believe this is a true public health problem". He estimates that today suffering due to polio is today rather minimal, at least compared with other public health challenges, however, the problem is that if you give up on this effort then polio is going to re-spread everywhere. And then you'll have to restart all over again. "... given all the money and the effort that went to the elimination, it would be a shame to give up now. ... And if we don't respond to the challenge, who will? We are capable of making IPV, so we have the means." In addition,

the company wishes to maintain positive relationships within the public health circles (Perrin 2006).

5.2.3.2 Sanofi Pasteur's role in GPEI

Sanofi Pasteur considers itself as a privileged partner of the Global Polio Eradication Initiative, and does not view the GPEI collaboration philanthropic by nature (Perrin 2006). The vaccine division works in an independent and direct manner with the GPEI organisation to improve access to vaccines, without the involvement of Sanofi-Aventis headquarters (Bompart 2006). The IFPM, Internationally Funded Public Market department of Sanofi Pasteur is responsible of the GPEI partnership working in close collaboration with the WHO ensuring the sufficient supply and manufacturing capacity of polio vaccines (Ibid). "The difficulty with vaccines is that the industrialised tools are not very flexible. If Unicef needs to increase their campaigns, we need to know it at least 1-2 years ahead of time. … And that is where the problem lies in. … Unless there is a clear signal that it will be needed, no one is able to manufacture it. People are only going to manufacture it if they think they will be able to sell the vaccine. … The vaccines world is almost chronically in a shortage situation. The demand is well above the supply, which is not the case for drugs. So Sanofi Pasteur tries to make sure that they can produce large amounts of vaccines when needed and at a cheap price to make affordable for public tender." (Ibid)

According to Bompart (2006) selling vaccines at (manufacturing) cost without profit margin, is the most common way of "doing business" with the

LDCs. The most visible part of Sanofi Pasteur's partnership to GPEI has however been vaccine donations, which are to date valued at USD 18 million bringing the total number of donated doses to 120 million (Global Polio Eradication Initiative, 2008; Sanofi-Aventis 2008b, 38). Additionally, in 2007 Sanofi Pasteur donated 270 000 doses of IPV to Indonesia and continued to sell the vaccines at cost to GPEI (Sanofi-Aventis 2008b, 38). Bompart (2006): "The donations are not the usual philosophy of Sanofi-Aventis. Here we have a no-profit-no-loss approach so we sell, not to make profits, but we sell." Further, Sanofi-Aventis is trying to find alternative means with Sanofi Pasteur in order not to only offer vaccines at discounted prices but enable access through other mechanisms (Ibid).

To continue, Sanofi Pasteur is not only providing vaccine doses, but also advising GPEI's stakeholders concerning immunisation strategies (Bompart 2006, Perrin 2006). Sanofi Pasteur experts attend a lot of meetings with NGOs and the WHO to work on projects together (Bompart 2006). The company is also "very much in contact with local governments to discuss specific programs and interests to them.." (Ibid). As the eradication of poliomyelitis has proven out to be more difficult than anticipated, due to oral polio vaccine's (OPV) instability and infective nature, the company has begun recommending the injected polio vaccine (IPV) as the best immunisation strategy worldwide (Bompart 2005, 163-169). Problematically, the price of IPV is currently 10 to 15 times higher than the OPV (Perrin 2006). Due to the persistent apparition of new cases caused by the OPV, WHO is now considering from a new perspective financing the introduction of IPV to developing countries (Perrin 2006). Sanofi Pasteur is thus currently developing new IPV combination vaccines that would be

better suitable for developing country use considering available financial resources and infrastructure (Bompart 2006). Further, following recommendations from the GAVI and the WHO, Sanofi Pasteur has decided to take in charge the production of 300 millions doses of IPV, available in case of a new epidemic spread, and further, generating economies of scale making the IPV cheaper and consequently more affordable for developing country populations (Perrin 2006). The production run is sold at cost to GAVI (Ibid). The challenge here remains at the industrial level as new drastic security measures of vaccine confinement will have to be put in place at every stage of manufacturing (Ibid).

The firm also invests massive internal resources (both financial and in terms of R&D), despite of the clearly weaker return on investment than in other projects. In 2005, at the WHO's request Sanofi Pasteur developed a new monovalent oral polio vaccine (mOPV1) that causes about 95-98% of the current cases in LDCs (Bompart 2006). "That was a concrete contribution by Sanofi Pasteur. We developed the vaccine in less than six months. … It was purchased only by WHO." (Ibid). Sanofi Pasteur licensed the mOPV1's production up to 50 million doses to be used in Egypt and India as a critical part of the eradication of the disease in the country (Ibid). Today, the firm continues to provide the bulk mOPV1 to a manufacturer in India, to fill and package for local use (Ibid).

Further, in the context of GPEI, Sanofi Pasteur carries out a lot of empirical studies, mostly to study the prevalence of polio and the evolution of the disease as well as the response of poliomyelitis virus to current vaccines. According to Sustainable Development Report 2004 (Sanofi-Aventis 2005,

20), the company has funded empirical studies concerning the introduction of the injected polio vaccine in Latin America. In addition, Sanofi Pasteur has financed the Pasteur institute's program for polio surveillance and research in Madagascar (Ibid). An important technological advance for the poliomyelitis eradication initiative has been the individual vaccine vial monitor (VVM), a thermostable marker which changes colour if the vaccine has been exposed to excessive heat and thus, lost its efficacy (Hull et al. 1999). Sanofi Pasteur has modified the industrial operations to enable adding the VVMs to their polio vaccines (WHO 2002, 10). WHO (2002, 10) evaluates that gains in GPEI would hardly have been feasible without VVMs, especially in sub-Saharan areas. Next, this study will draw together and analyse the findings on Sanofi Pasteur's role in GPEI.

5.3 Analysis

Global Polio Eradication Initiative has succeeded in eliminating polio in majority of countries and consequently provides an opportunity to identify best practices and success drivers in the field of public-private health partnerships. This chapter discusses the findings of the initiative's longest standing private sector partner Sanofi Pasteur's role in GPEI and analyses them against the literature review of the section 2. The analysis follows the structure of the theoretical framework.

5.3.1 Alliance drivers

Literature reveals that the concept of health access PPPs was established in the late 1990's, after which the number of partnerships has rapidly exploded. Consequently, GPEI at its launch in 1988 was undoubtedly a forerunner in the field and within the pharma industry Sanofi Pasteur's decision to get involved rather innovative. The vaccine sector has nevertheless been traditionally predominantly public sector-led and thus, collaborating with the public organisations did not greatly differ from the daily activity of the company.

According to scientific discussion, pharmaceuticals have come to understand the importance of public health goals for their immediate and long-term objectives, and to accept a broader view of social responsibility as part of the corporate mandate. Sanofi Pasteur's drivers seem profoundly thought following the recommendations and best practices documented in the literature as well as the private sector's trends at large. Originally, Sanofi Pasteur became involved with the initiative for historical reasons and for its extensive product portfolio, know-how and manufacturing capacity, but today the company remains involved firstly, for ethical reasoning and for the sake of responsibility. Francois Bompart of Sanofi-Aventis drug access department stresses this logic: "If we don't respond to the challenge, who will? We are capable of making IPV, so we have the means." This takes the business ethics' view according to which global health companies have a special obligation to help because of their competence, resources, and expertise because firms possessing a unique human catastrophe rescue competency have a moral obligation to devote resources to aid victims of

catastrophes. Sanofi Pasteur aims to engage itself in only few initiatives at a time, close to its business competence and consistent with the company's strategy.

Secondly, the pharmaceutical sector is perceived as greedy and hard, due largely to the dilemma of applying market economy ruling to the health sector. Participating in socially responsible activity facilitates overcoming the negatively perceived public image and protects against bad publicity. During the interview, it comes out that the former CEO of Sanofi-Aventis, Jean-Francois Dehecq's vision of drug access department was partly driven by this idea. Nevertheless, Francois Bompart contradicts this later in the interview claiming that efforts to better access to health are not done for public relations purposes. It becomes clear that the company's participation is driven of variety of reasoning and is not opportunistic by nature, however, the PR benefits of the PPHP cannot be avoided. It seems that the battle against reputation damages has made the industry irrationally defensive.

Thirdly, Sanofi Pasteur wants to maintain good relations with the intergovernmental organisations and intensify its close interaction with the civil society and local governments. Fourthly, the access to medicines affairs can be seen as a competitive advantage in human resources management in terms of recruitment and current talent retention and the findings show that Sanofi Pasteur's staff is enthusiastic about getting involved with the drug access department. Fifthly, Dr. Bompart stresses the large proportion of developing country population to whom the industry currently has no access. In other words, these people do not benefit from the current health innovations and illustrate unfulfilled market potential for the pharmaceutical

industry. Following C. K. Prahalad's "bottom of the pyramid" theory, Bompart (2006) confirms that Sanofi Pasteur has "plans in the developing world" and the health partnerships are a way to "try to understand how and what we could provide them (population in LDCs) by using our know-how, which are the drugs." Further, since the Unicef procures 40% of global paediatric vaccines and Sanofi Pasteur is the leading manufacturer of these basic vaccines, one can conclude the importance of this procurement relationship.

Sixthly, through GPEI Sanofi Pasteur continues capitalising on the 50 year-old vaccine innovations and extending the product lifecycle of polio vaccines. However, knowing that the polio vaccines are sold to LDCs through public UN tenders at (manufacturing) cost, this "opportunity" yields very little direct profits. Further, as the vaccine industry is chronically in short of capacity, the industrial capacity of polio vaccines could also be directed to more profitable product categories such as influenza or private market vaccines. However, due to heavily regulated operating environment, the cost of re-programming the vaccine manufacturing plant and the re-approval process would be important, making it more attractive to continue manufacturing the original polio vaccines. In addition, since the fixed costs in vaccine industry represent on average 85% of the total manufacturing costs per batch and the GPEI collaboration enables Sanofi Pasteur to manufacture large volumes at a time, the company is able to benefit from economies of scale. Bompart explained the drivers of Sanofi Pasteur in the following way: "it is not just because this (GPEI) would be a possibility to us to sell the vaccines but because we believe this is a true public health problem".

To conclude, the driving values of Sanofi Pasteur lie rather in the ethical reasoning, social responsibility, future market opportunities, public relations and relationship building, than in short-term maximisation of the return on investment through exploitation of old product portfolio. These findings are rather identical with the theoretical findings of the section 2. The literature review brought up corporate social responsibility, new market creation, bettering of corporate image through brand management tools, relationship building with the governmental actors and talent retention/recruitment as the principle drivers of private sector partners' in PPHPs. Finally, the traditions oblige Sanofi Pasteur; owing to its history, the firm has been able to acquire an extensive portfolio, know-how and manufacturing capacity of poliomyelitis immunisation tools that have been fundamentally important to GPEI's success. Next, the partnership process and Sanofi Pasteur's role within will be analysed.

5.3.2 GPEI partnership process

This sub-chapter analyses the role of private sector partners in public-private health partnerships, in particular the role and influence of Sanofi Pasteur in Global Polio Eradication Initiative. The private sector partners act often in PPHPs in supportive roles guaranteeing the supply of health products, providing expertise on the pathology and prevalence of the disease and bringing in supplementary financial and other resources. The companies' representatives participate in meetings and coordinate the efforts, however, despite the official corporate partnership with the initiative, pharmaceuticals seem not to be involved actively in the operative management of the

partnerships. Therefore, it can be concluded that the role of the private sector partner is supportive by nature and resembles more that of a supplier than a lead partner. Running the day-to-day operation of a PPHP is either left to the hands of public sector partners, namely the international organisations or a separate staff, located often in MLO's offices. The secretariat of GPEI locates in WHO's premises in its Geneva headquarters. Sanofi Pasteur has internally nominated a group of experts whose responsibility is to follow and coordinate the company's participation and actions within the partnership. These representatives attend GPEI's meetings but locate in Sanofi Pasteur's premises.

Following Sanofi-Aventis' headquarters' policy, Sanofi Pasteur's role in GPEI is focused on the unique know-how of pharmaceutical industry: research and development, industrial operations, logistics and distribution. Following on the Luostarinen and Welch's classification, Sanofi Pasteur's collaboration with the GPEI falls firstly into the category of industrial manufacturing and production cooperation and secondly, in research and development cooperation. The partnership has no direct commercial objectives. Findings show that the involvement of vaccine industry is highly critical to the polio initiative due to the vaccine manufacturing inflexibility and difficulty in guaranteeing an adequate supply of polio vaccines. According to Austin's (2000a, 20-29) classification, Sanofi Pasteur's role in GPEI can be regarded transactional (the depth and level of commitment to the partnership being evaluated).

In practice, the role of Sanofi Pasteur has consisted of firstly, working in an independent and direct manner with the WHO ensuring the sufficient supply

and manufacturing capacity of polio vaccines. To be able to sustain the immunisation goals, the company needs to know the immunisation strategy of GPEI/WHO well in advance (1-2 years). Bompart (2006) hints that this has not always been the case, there is a need for more open communication and shared knowledge between the partners. To continue, the company practises differentiated pricing selling vaccines at cost without profit margin to GPEI, and in addition further aims to reduce the total costs of manufacturing through industrial streamlining and by manufacturing larger production runs. In addition, Sanofi Pasteur has partly licensed polio vaccine production and provided the bulk antigens to developing country manufacturers to better locally the access to immunisation tools. The company does not regard the GPEI collaboration philanthropic by nature. However, secondly, the most visible part of Sanofi Pasteur's partnership to GPEI has been vaccine donations, which are valued at USD 18 million bringing the total number of donated doses to 120 million. To conclude, the company's official "no-profit-no-loss" approach is somewhat contradictory with this behaviour. Sanofi Pasteur got the official status of "corporate partner" of GPEI only in 1997, when the company initiated its large scale donation program. This period also coincides with the rise of resistance to pharmaceutical industry due to the lack of access to HIV/AIDS –antivirals in least developed countries.

Thirdly, Sanofi Pasteur's role has been to make the most of its R&D know-how by improving current prevention tools such as development of new IPV combination vaccines better suitable for developing country use and introduction a new monovalent oral polio vaccine (mOPV1). The company is prepared to develop drug formulations according to specific needs and

requirements in LDCs. Fourthly, the company shares its expertise on public health matters pro bono with international organisations and governments and also, provides information for developing country population. Sanofi Pasteur's role in GPEI is to share its medical expertise and advise the stakeholders concerning immunisation strategies. Further, the company carries out and funds a lot of empirical studies, mostly to study the prevalence and evolution of polio.

Considering Sanofi-Pasteur's engagement in GPEI, according to Tulder and Zwart's (2006, 192-198) classification, the company's approach to societal affairs is more welfare-oriented and can be regarded as active. Active firms address non-profit issues, though within the company's operational interest. Sanofi-Pasteur stresses its role as firstly, a vaccine supplier and research-based pharmaceutical industrial and secondly, a specialist in the field, willing to provide its expertise to public health authorities in regards to developing countries. However, more typically to proactive approach the top management of Sanofi-Aventis is strongly committed to the initiative. Further, according to Austin (2000a, 20) corporations that wish to work with non-profit organisations usually want to move beyond charitable activities to a relationship that is more business like. Conversely, Sanofi Pasteur began in 1988 cooperating with the GPEI based on transactional industrial suppliership and later in 1997 also commenced vaccine donations to gain the official status of a corporate partner to the initiative.

The literature on private sector's role in public-private health access partnerships is minimal, and the subject has been briefly touched upon in other contexts. Traditionally private sector partners have taken philanthropic

commitments and donated goods and finances to PPHPs. To conclude, Sanofi Pasteur has taken a more modern approach and its diverse role in GPEI is in line with the company's strong commitment to the initiative and an example of 21st century's partnership. The outcome of GPEI partnership will be next discussed.

5.3.3 Alliance consequences

The literature review concluded that cross-sector cooperation is fundamentally an instrument to overcome organisational barriers and to reach goals that would individually be unattainable. The primary consequence and most visible result of the Global Polio Eradication Initiative is the elimination of polio as the number of annual polio cases has been brought down from 350 000 in 1988 worldwide to less than 2000 cases in 2006, which demonstrates the efficacy of this very successful partnership. Poliomyelitis has now been eliminated in most parts of the world. According to literature the attainment of partnership objectives and the satisfaction of one party with the other are suitable indicators of collaboration's success. Clearly, the partnership has been able to attain its objectives at large and further, a good sign of the partners' mutual satisfaction is that all the GPEI's original partners from the 1988 are still on board of the initiative.

Sanofi Pasteur's role to the GPEI, being the primary supplier of polio vaccines in the initiative, has been significant. Originally, GPEI was projected to eradicate polio by 2000. However, due to the instability of oral polio vaccine and the resulted epidemics of vaccine-derived-polio-viruses,

the campaign has been prolonged. As a consequence, keeping up the enthusiasm of the funding partners and the public health professionals is getting difficult and the stakeholders tired of seeing the repeated vaccination campaigns. Thus, sustainability and commitment of private sector partners is vital. The literature confirms that in general continued support by stakeholders in maintenance as well as the intensive phases of elimination and control is crucial if resurgence of disease is to be avoided. Sanofi Pasteur highlights their commitment to GPEI as follows: "We are really very much part of the partnership with WHO so we are in this for the long time. ... given all the money and the effort that went to the elimination, it would be a shame to give up now."

Sanofi Pasteur has become the sole supplier of IPV vaccines to the United Nations, however, the vaccines are sold at cost and at best the direct commercial benefits of this procurement agreement with the Unicef enables Sanofi Pasteur to operate at higher capacity. Nevertheless, indirect positive consequences of the company's involvement in polio eradication include the ability to build relationships with the local authorities, markets and consumers in least developed countries. To continue, the emerging economies are gaining in importance within vaccine industry and vaccines are rising in revenues in pharmaceutical industry. GPEI has laid an excellent position and reputation for Sanofi-Aventis to capitalise on when in contact with the local governments. Also, as the pharmaceutical sector is becoming more heavily regulated, the business environment more dependent on political atmosphere, the relations that Sanofi Pasteur has been able to build in the context of GPEI are to ease the cooperation with the authorities.

As an outcome of the partnership, the Sanofi Pasteur says it holds no longer belief in long-term donation programs to redress the access challenge but on the contrary, looks for more sustainable win-win strategies and local capacity building in its actions. The GPEI experience has shown to Sanofi Pasteur some of the bottle-necks that need to be confronted when improving access to vaccines in LDCs: anticipating the industrial requirements sufficiently ahead of time, matching the demand and developing right vaccine combinations. According to literature review, business organisations stand out of the governmental and civil society actors in relation to accountability. Following the GPEI, Sanofi Pasteur further expresses their interest in improving the reporting and measuring of the impact of public-private health partnerships. The scientific community believes in data, which Bompart wants to produce, "we want to bring data". Another way in which he wants to develop the company's role in future partnerships is to take more active scientific role by conducting more empirical studies.

According to this study, no significant risks materialised in the GPEI – Sanofi Pasteur collaboration. The literature stresses that alliances have shown to be unstable and suffer from a high failure rate. Other possible threats for stakeholders are loss of autonomy, information asymmetry and increasing complexity as one partner may take more than it gives and emerge later as a competitor. The GPEI's challenges in Nigeria, showed that the country of origin of the vaccine manufacturer can have an impact on its eligibility and role in a health partnership. Nigerian authorities would not commence the polio immunisation campaign unless it was guaranteed that the vaccines used will come from another Muslim country. Simultaneously,

the research reports that Unicef procures increasingly from Indian and Indonesian manufacturers, rather than from (Western) multinationals.

To conclude, the GPEI has successfully eliminated poliomyelitis from majority of countries however, the commitment of the stakeholders is vital until a total eradication is achieved. The consequences of Sanofi Pasteur's role to the GPEI has primarily been the ensured supply of vaccines, the company has also benefited from the partnership by building relationships with the local authorities, markets and consumers. As an outcome, the company aims to solve current industrial bottle-necks and build mechanisms to measure the impact of PPHPs. The next section summarises the thesis and then briefly presents the results of this study.

6 Summary, conclusions and recommendations

6.1 Summary

The objective of this research was to contribute to the discussion on private sector's, notably on pharmaceutical industry's, involvement in international health. Moreover, this thesis aimed to study the role of private (for-profit) sector partner in public-private health partnerships in bettering access to health products in least developed countries. The first sub-problem sought to identify how do multi-stakeholder alliances function and what are the drivers and success factors for these collaborations. In this context, the study relates to a collection of theories on alliances in public-private sphere. More specifically, Jakki Mohr's and Robert Spekman's study (1994) on characteristics of partnership success and James E. Austin's work (2000a, 2000b, 2004) on strategic alliances between non-profits and businesses guided the discussion.

Subsequently, the discussion was narrowed down to partnerships active in the health care sector in developing countries. The literature review approached this topic by exploring alliances between public and private organisations, the so-called public-private partnerships. I discussed Emanuel Savas' work on privatisation (2000), which gave perspective on PPP drivers and Michael Spackman's (2002) research on PPPs in United Kingdom, which has a long history in using public-private partnership model in organising public services. The literature revealed that PPPs are being regarded as a cost-efficient and effective instrument for the implementation of public policy and thus, they have also become a frequently used approach in the provision of health care. Then I laid foundation for public-private

health partnerships by presenting the literature on global health alliances and described how these partnerships function; why they have been established and who their multiple stakeholders are. The rise of public-private health partnerships has in particular effected the global (multilateral) governance of health, which was discussed in the context of Kent Buse's and Gill Walt's (2002, 2000) studies. Two types of partnerships exist as PPHPs have primarily emerged in the areas of research and development, and of access to medicines and vaccines. This study concentrates solely in access to medicines questions for developing countries that was then discussed through Michael Reich's (2000) and Roy Widdus' (2005) work. To continue, the three main stakeholder groups of governmental, civil society and private sector organisations were examined.

To understand the role of private sector partner, I discussed how the private sector partner can assist in bettering the access and why do individual (pharmaceutical) enterprises want to partner a public-private health partnership and better the health of developing country populations'. The main contributing theories were drawn from the aforementioned literature and Coimbatore K. Prahalad's (2005) as well as Rob van Tulder's and Alex van der Zwart's (2006) studies. Tulder's and Zwart's (2006) publication on private firms role when linking corporate responsibility and globalisation leads the discussion and C. K. Prahalad's (2005) work on eradicating poverty through profits provides another logic for private sector's motives in PPHPs. Prahalad's main argument relies on the enormity of purchasing power of the collective global poor. The business ethics and moral obligations of pharmaceuticals were being discussed through Thomas W. Dunfee and Klaus M. Leisinger.

Finally, to study the private sector partner's role in practice, a case study was conducted. The Global Polio Eradication Initiative (GPEI) was chosen as a principle research subject as it is being regarded the largest global public-private health initiative to date and has successfully contrived to eliminate polio from majority of countries offering a possibility to identify best practices in the field. Sanofi Pasteur is the initiative's longest standing corporate partner and, having contributing to GPEI's achievements, it offers a fine example of the private sector's role in a public-private health partnership. Thus, analysing the key drivers and role of Sanofi Pasteur within GPEI, offers an indication of the success factors of public-private health partnerships. In the following chapter, the findings of this thesis will be presented.

6.2 Presentation of results

This part presents the findings of this thesis on private sector's role in public-private health partnerships. The theoretical framework, as discussed in chapter 3, presents the results of this study in a figurative format. The following three chapters are organised to answer the research questions respectively.

6.2.1 Drivers and success factors in alliances

Business alliances have become a key corporate asset as different collaboration forms replace rigid hierarchies of organisations and markets. Nevertheless, transnational alliances have been on the rise since the 1950's.

Today, globalisation mandates alliances and some of the most rapidly growing forms of international strategies are those involving strategic alliances. Public-private partnerships are a sub-form of alliances, referring to collaboration between private actors and public not-for-profit organisations.

The literature reveals that partnerships are principally created to gain competitive advantage in the markets. Cross-sector cooperation is an instrument to overcome organisational barriers and to reach goals that would solely be unattainable. Alliances are thus being treated as an alternative for internationalisation and growth strategies. Typically organisations seek in alliances access to knowledge, new markets, resources or wider product range, answer to a competitive threads, savings in transaction costs and joint R&D, production or risk sharing of large-scale projects. Luostarinen and Welch (1990, 196-202) have accordingly divided the international collaborative agreements into four groups: 1) research and development cooperation, 2) commercial cooperation, 3) industrial manufacturing and production cooperation, 4) managerial cooperation. The benefit of an alliance structure is that it provides organisations more flexibility than mergers and acquisitions and while companies remain separate and independent, having less administrative costs. Furthermore, strategic alliances have increased trade between developed and developing countries.

On the negative side, alliances have shown to be unstable and suffer from a high failure rate. Nevertheless strategically important and long-standing alliances have higher survival rates. Next to alliance failure, other possible threats for stakeholders are loss of autonomy, information asymmetry and increasing complexity as one partner may take more than it gives and

emerge later as a competitor. Moreover, multinationals, in particular those attempting to enter developing countries may be obliged to form an alliance with a local partner due to pressures from host government. Thus, prior to engaging in a partnership, there is a need to identify the underlying motives and objectives of both parties for cooperation. Next, the discussion will be directed towards the antecedents of successful partnerships.

The attainment of partnership objectives and the satisfaction of one party with the other are suitable indicators of collaboration's success. Mohr's and Spekman's (1994, 137-139) antecedents for alliance success are three-fold. Firstly, successful alliances commonly project following characteristics: high level of commitment on the cooperative relationship, strong coordination of actions, interdependent working relation and trust. Secondly, organisational functioning of partnerships is being influenced by communication behaviour. Thirdly, more successful alliances adopt constructive management techniques of conflicts. Austin (2000a, 173-185) has captured success factors in his "7 C's of strategic collaboration" model. He stresses the need to create value for all parties and in public-private partnerships the value created must equally be useful to society. The challenge is to share enough skills to create advantage while limiting the transparency and transfer of core skills to the partner. The alliance must be viewed as a long-term, committed relationship involving continuous learning. Successful companies enter alliances with clear targets and understanding of their partners´ objectives. Choosing the right partner will improve the probability of alliance success, nevertheless, partner organisations need not have a total fit. Elsewhere in the literature it is stated that the motives for partnership should be positive and future-oriented. The

relationship is institutionalised as well as given a formal status and the partners show integrity behaving mutually respectfully. Finally, organisational and cultural dissimilarity in partners' organisational cultures and business practices, which is the case in public and private sector organisations, impacts the alliance's success and may result in increased level of uncertainty for each partner.

6.2.2 Public-private health partnerships

During the 1990s, public-private health partnerships (PPHPs) have evolved into popular means of addressing a number of serious diseases in the developing world. The transformation of central-local government and changing state-private sector relationships have given rise to the fragmentation of publicly funded organisations. PPPs are being regarded as a cost-efficient and effective instrument for the implementation of public policy and have become a frequently used approach in the provision of health care. The concepts of privatisation and public-private partnerships are at times treated as synonymous as both reflect market principles, market forces as well as competition, and aim to improve the productivity of public management.

The literature evaluates global health on the basis of health equity and so health alliances are primarily driven by the aim of sustaining and promoting equitable access to health care. United Nations has taken very positive stand encouraging the creation of public-private partnerships for development as traditional public health groups are increasingly confronted by limited financial resources, complex social and behavioural problems and rapid

disease transmission across national boundaries. Concurrently, business sector has come to understand the importance of public health goals for their immediate and long-term objectives, and to accept a broader view of social responsibility as part of the corporate mandate. The international community woke up to the global health disparities at the introduction of anti-retroviral medicines for HIV in late 1990's. Today more than 100 global health partnerships exist.

These public-private health partnerships are predominantly concerned with research, global coordination and finance mechanisms, access to drugs and vaccines, health system strengthening and public education. They are being defined as alliances, which involve at least one private for-profit organization with at least one not-for-profit organisation. The core partners then provide a joint sharing of efforts and benefits and make a commitment to the creation of improved health. Further, there are a few international actors that influence the current public health partnership landscape above others including Bill and Melinda Gates Foundation (BMGF), The Global Fund, the Global Alliance for Vaccines and Immunization (GAVI) and World Health Organisation (WHO). Other significant actors in building up the awareness on global health inequities are politicians, intellectuals, wealthy philanthropists, industrials and celebrities. Well-known public figures are able to provide invaluable visibility for social causes, however, there is also resistance to so-called superstar politics as uneven distribution of health is accentuated by irregular government support and private donations.

The rapid development of global health partnerships has also awakened the interest of academia, and publications in the area soar. The rapid rise of PPHPs and increased economic importance of civil society has influenced global governance. Specialists in the area, Kent Buse and Gill Walt are concerned that partnerships will fragment international development in health and challenge UN objectives for cooperation and universal health equity. There is no scientific evidence regarding the effectiveness of partnerships and of the circumstances under which a PPP approach to health should be preferable to more traditional models. Moreover there is doubt over the accountability and the potential negative impact of partnerships on health inequities, caused by focusing on narrow issues instead of complex and more research on designing an independent regulatory body and guidelines on PPHPs are being sought.

At current time effective and efficacious therapies do not reach all those in need, be it for financial or infrastructural reasoning. Prevention and treatment of major tropical diseases such as HIV, Malaria and TB are inadequate as there are no vaccines and many existing diagnostic tools and therapies are threatened by increasing resistance or are difficult to use. To overcome the market and government failure, PPHPs have been established and for the most part can be clustered into following two groups: those dealing with the development of new health products, the so-called product development partnerships (PD PPPs), and those concerned with improved procurement and distribution, the so-called access to medicines partnerships (Access PPPs).

Product development (PD PPPs) have emerged in the 21st century as rising drug development costs have pushed pharmaceutical companies out of R&D for the diseases of the poor. However, corporate world has recently taken an interest in socially responsible behaviour and the collective purchasing power of low-income population is being recognised. Sufficiency and sustainability of funding remain serious challenges in PD PPPs. PPHPs operational environment is significantly limited by tight restrictions concerning pharmaceutical and vaccine manufacturing. So, vaccines to LDC markets are typically manufactured in a Northern country. Importing drugs and vaccines to developing countries sets additional exigencies. To some scholars a strong capacity for innovation and production in local markets represents the only truly sustainable means of answering to the aforementioned challenges. Across the vaccine field, shortages in development and manufacturing capacity and the need for coordination has been acknowledged as insufficient capacity is slowing the entire vaccine development. This proves how interlinked research, development and manufacturing are.

Access public-private partnerships tackle to surmount environmental challenges in getting the therapies from the manufacturer to those in need in developing countries. According to literature, health products targeted to global use have a rather slow introduction into the poor countries due to inadequate infrastructure and planning, logistical difficulties in storage and in delivery of fragile medicines, high pricing, and other market challenges such as lack of distribution channels, strict international trade regulations, parallel imports and counterfeit drugs. The research showed that in order to

administer sustainably public health challenges, it is recommended for the PPHPs to involve and partner with the target country authorities.

Primary stakeholders of PPHPs can be clustered into governmental, civil society and private sector organisations. Governmental organisations include multilateral organisations (MLOs) that have taken an interest in partnering with the private sector primarily in order to access new resources, acknowledging the expanding role of corporations. National governments and health authorities can be either in a giving or receiving role as partners in a PPHP. Developing country governments participate in health policy formulation, fund health products, provide the infrastructure for partnerships and communicate to target population. The sustainability of achieved results lies in the hands of local actors. Civil society actors include non-governmental organisations (NGOs), humanitarian actors, that are flexible entities working close to the field and bringing concrete aid where needed. They are being viewed as respectful actors in international health and wanted partners in PPHPs due to their access to locals and thus, having up-to-date information of local conditions. Further, private foundations can provide substantial funds with the ability to act as catalysts and influence the political agenda of initiatives. They are often able to act faster than global corporations or MLOs and with more resources than NGOs. However, they are sometimes criticised for distorting the development aid landscape and opportunistic behaviour. Finally, academia provides the global health arena with research, reflection and recommendations. Private sector consists of pharmaceutical industry and other health sector companies. Pharmaceuticals possess unique technical know-how and their role can be philanthropic, transactional or integrative according to the depth and level of commitment

to the partnership. Business organisations stand out of the governmental and civil society actors in relation to accountability as their management is held accountable to the company's shareholders and is expected to maximise performance. Therefore, for many, a major concern in PPHPs is the conflicts of interests and the company's possible tendency to promote its vested interests.

6.2.3 Private sector's role in health partnerships

Globalisation and the consolidation vague of the 1990s have increased the power of individual companies. PPHPs continue to blur traditional distinctions between the public and private sector's aims and responsibilities and the rise of strategic alliances makes it natural for companies to extend this form of organisation to its relations with public sector entities. However, considerable scepticism exists about the motives of private firms that engage in partnerships and there is fear of the firms exploiting the collaboration Apart from the scepticism, managerial literature shows PPP collaboration in rather positive light. However, it must be noted that risks exist in PPHPs for market-based partners similarly than in strategic alliances, as discussed in chapter 2.1.1. To reduce these risks, one can set contractual limits to partnership transparency and manage the allocation of partner contributions, and governance to limit the loss of intellectual capital. According to literature review, the challenge for both non-profits and business corporations is to find ways of working together that are mutually beneficial. Regulations are one way to tackle the mistrust but no comprehensive, ethical framework to guide global health partnerships exists despite the efforts and discussion.

Little academic research exists on the actual roles played by the partners in PPHPs. Tulder and Zwart (2006, 8-9) propose the following description: the government creates through legislation the framework that structures the society. The business sector primarily creates value and welfare for society by turning inputs into outputs within the legal framework. The civil society represents the network of citizens that structure society outside politics and business. The role of private sector partner varies from partnership to another and can evolve during time. As the company's role evolves from philanthropic and transactional towards more integrative collaboration, its responsibilities grow and the relationship complexity increases with the value creation potential for parties and their environment. Global poverty and poor health conditions are the main the responsibilities of governmental organisations, which solely possess society's mandate and appropriate institutional capabilities. Firms only have an indirect responsibility for issues located at the state-civil society interface, including international health. However, business ethics claim rather unanimously that firms possessing a unique human catastrophe rescue competency, including pharmaceuticals who exclusively produce, hold patents and distribute therapies, have a moral obligation to make a significant contribution to the health of poor. Further, there is a need for health companies to provide detailed financial information pertaining to their donations and social initiatives. When taking up these societal positions, companies have to assess the following five interfaces of PPPs: local/national/regional/global connections, boundaries of public-private spheres, interactions between profit-non-profit sectors, technology-society continuum) and reflect between operational and visionary strategies.

The ability of the public sector to achieve universal access to health products is "inextricably linked" with the behaviour of the vaccine-pharmaceutical industry. Firstly, the principal reasoning for pharmaceutical industry's involvement in PPHPs is their ability to literally facilitate access to existing therapies and in this, their role is crucial. They can greatly fasten the local market access, ease building trust and bring a foreign partnership greater influence within (local) public health authorities of which sustainability of initiative's efforts depends and further, guarantee adequate production capacity and availability of drugs and vaccines. Secondly, PPHPs can be seen as a way of promoting entrepreneurship, introducing management capacity as well as bringing advice, efficiency and efficacy into the public sector bureaucracy and build capacities within recipient country. Thirdly, governmental organisations in particular seek to bestow credibility and legitimacy and involving industry as a stakeholder in the public affairs may harness industrial support and authority for political entities. In addition, non-profits are today more openly searching common grounds to link the community needs with business interests. Fourthly, in the public affairs environment, where resources are scarce, partnering with a market-based organisation can alleviate budgetary constraints and enable multilateral organisations to fulfil their mandates. Fifthly, for-profits in access to health partnerships are expected to advance operating environments for local industries and firms as well as further facilitate direct business opportunities for the local business sector.

The corporate dictum of "creating value for shareholders" is being replaced by a broader notion of "creating value for all stakeholders" and the motive

of health care companies' to incorporate social variables to their core corporate strategies has increased. Firstly, the concepts of corporate social responsibility (CSR), and corporate citizenship (CR), have changed the way business is done. The drivers for CSR include strengthening organisational identity (value-based), reflecting the firm's position in society (dialogue-based), preventing reputation damage and developing commercial opportunities (stakeholder-based). Following this idea, the societal affairs are increasingly integrated into more functional areas of management such as marketing and supply management. Tulder and Zwart (2006, 192-198) classify companies' social programs distinguishing the following four approaches: inactive, reactive, active or proactive. Secondly, market creation is the explicit goal of a number of firms in PPPs as the purchasing power of currently under-served low-income population is being recognised. C. K. Prahalad's topical studies aim to convince foreign businesses of the opportunities that lie in the developing markets. Industry participation can be motivated by the opportunity for new market identification, development, penetration and manipulation or by direct financial benefits in the form of tax breaks or public subsidisation of innovative products and services.

Thirdly, high visibility and sexy causes find it easier to find partners and financial resources for their lucrative co-branding opportunities. The public image of the pharmaceutical sector commenced to suffer at the introduction of HIV therapies in the late 1990s but the public continues to believe that the industry enjoys unnecessary high product margins exploiting sick and poor. A more immediate benefit of PPHP to business can be said to lie in the public relations, image promotion and brand development. Fourthly, business environment having become increasingly political, the partnership

can give much needed authority and added legitimacy to private sector partners through association with respected governmental organisations. This can translate into opportunities in the development and implementation of global trade regulations, policy-making and health standards or enable to gain access to policy-makers. Companies that operate in LDCs, need a degree of predictability as political instability increases the risk of investment. Proximity to governmental organisations can further decrease the risk of compulsory licensing as in exchange to selling tier-priced medication to LDCs, the industry has asked for strengthened intellectual property protection. Fifthly, public-private partnerships have become companies' competitive advantage in human resources management as societal partnership can help the company attract and retain employees and board members. Business school students want to save the world. In recent years the fluidity for employees to crossover corporate, non-profit and public sectors has equally increased.

To conclude, pharmaceutical manufacturers have a long track record in partnering with the public sector. For example, over half of the vaccine market has traditionally been controlled by the public health sector purchases through governmental contracts. The rise of public-private health partnerships has accentuated this. The discussion on PPHPs is marked by the unwillingness to accept and understand these differing roles. Continuing scepticism and suspicion towards each others' seems to be politically biased and motivated. It is not seen natural for the business sector to pursue (commercial) advantages in LDCs, as it is natural for governmental authorities to claim public health gains. Nevertheless, a clear change is ahead as the recent observation on business students' interest in societal

affairs and the increased fluidity in profit/non-profit employment market shows. The boundaries between sectors are indeed blurring. The Figure 12 below presents the significant benefits and drivers for the private sector's participation in PPHPs. The next chapter shows the results of the empirical research that was conducted in the context of Global Polio Eradication Initiative and studied the drivers and role of the private sector partner, vaccine manufacturer Sanofi Pasteur.

BENEFITS FOR PUBLIC SECTOR PARTNER	MOTIVES OF PRIVATE SECTOR PARTNER
Drug and vaccine access acceleration	Enhanced corporate citizenship
Increased efficiency and transfer of business skills	Market creation
Capacity building	Brand management
Bestowal of authority and relationships	Improved interaction with public sector actors
Strengthening resources and sustainability	Talent retention and recruitment
Local economic growth opportunities	

FIGURE 12: COLLABORATION IN PUBLIC-PRIVATE HEALTH PARTNERSHIP: THE ROLE OF PRIVATE SECTOR PARTNER.

6.2.4 Case: Sanofi Pasteur's role in GPEI

The empirical research of the thesis was conducted in the context of Global Polio Eradication Initiative (GPEI) and private sector vaccine manufacturer Sanofi Pasteur's role in the partnership. Drawing on the primary and secondary empirical data, this section presents the case of GPEI and discusses the data and findings on the private sector partner's role in the initiative.

World Health Organisation launched in 1988 the GPEI, the largest global public-private health partnership ever targeting to eradicate polio worldwide and end the need for vaccination for the disease. At the inception of GPEI, wild poliovirus was endemic worldwide infecting est. 350 000 children every year. The partnership has since been able to attain its objectives at large and the number of annual polio cases has been brought down to less than 2000 in 2006. However, originally, GPEI was projected to eradicate polio by 2000. Due to the instability of oral polio vaccine and the resulted epidemics of vaccine-derived-polio-viruses, the campaign has been prolonged. As a consequence, keeping up the enthusiasm of the funding partners and public health professionals is getting difficult and the stakeholders tired of seeing the repeated vaccination campaigns. Thus, sustainability and commitment of private sector partners is vital.

Within the context of Global Polio Eradication Initiative, the private sector is mainly represented by vaccine industry. The involvement of polio vaccine manufacturers is highly critical to the initiative as only few companies in the world are able to guarantee an adequate supply of polio vaccines, due to the

vaccine manufacturing complexity and inflexibility. Sanofi Pasteur is the world's leading institution in poliomyelitis immunisation and the longest standing corporate partner to the GPEI. In addition, vaccine manufacturers Wyeth, Novartis, GlaxoSmithKline and Bayer have made minor contributions to the eradication campaign. Since 1988, GPEI has attracted a total international investment of USD 5.3 billion. The initiative has been primarily funded by its core partners G-8 and national governments, the WHO, Rotary International, the US Centers for Disease Control and Prevention (CDC) and Unicef. The private sector funding is 18% of the total budget.

Originally, Sanofi Pasteur became involved with the GPEI initiative partly for historical reasons and partly for its extensive product portfolio, know-how and manufacturing capacity, but today the company remains involved firstly, for ethical reasoning and for the sake of responsibility. The company takes the business ethics' view according to which global health companies possessing unique human catastrophe rescue competency have a moral obligation to devote resources to aid victims of catastrophes. Secondly, Sanofi-Aventis' drug access initiatives are partly motivated by the interest to overcome the negatively perceived public image of pharmaceutical industry and protect the company against future bad publicity. Thirdly, Sanofi Pasteur wants to maintain good relations with the intergovernmental organisations and intensify its close interaction with the civil society and local governments.

Fourthly, Sanofi Pasteur's staff has shown high interest in the firm's drug access initiatives and thus, partnering PPHPs can be regarded as a

competitive advantage in human resources management. Fifthly, large proportion of developing country population has currently no access to drugs and vaccines thus, illustrate unfulfilled market potential for the pharmaceutical industry. Following C. K. Prahalad's "bottom of the pyramid" theory, Sanofi Pasteur has future plans in the developing world and the company believes that health partnerships are a way to understand how and what they could provide the poor with by using company's medical know-how. Further, the Unicef procures 40% of global paediatric vaccines and as Sanofi Pasteur is the leading manufacturer of these basic vaccines, one can conclude the importance of this procurement relationship. Sixthly, through GPEI Sanofi Pasteur continues capitalising on the 50 year-old vaccine innovations and extending the product lifecycle of polio vaccines. However, knowing that the polio vaccines are sold to LDCs through public UN tenders at cost no direct profits are being made. Further, as the vaccine industry is chronically in short of capacity, the industrial capacity of polio vaccines could also be directed to more profitable product categories. Bompart explained the drivers of Sanofi Pasteur in the following way: "it is not just because this (GPEI) would be a possibility to us to sell the vaccines but because we believe this is a true public health problem".

So, following Sanofi-Aventis' headquarters' policy, Sanofi Pasteur's role in GPEI is focused on the unique know-how of pharmaceutical industry: research and development, industrial operations, logistics and distribution. Following on the Luostarinen and Welch's classification, Sanofi Pasteur's collaboration with the GPEI falls firstly into the category of industrial manufacturing and production cooperation and secondly, in research and development cooperation. In practice, the role of Sanofi Pasteur has

consisted of firstly, working in an independent and direct manner with the WHO ensuring the sufficient supply and manufacturing capacity of polio vaccines. The company practises differentiated pricing and sells vaccines at cost to GPEI, further aiming to reduce the total costs of manufacturing through industrial streamlining and by manufacturing larger production runs. In addition, Sanofi Pasteur has partly licensed polio vaccine production and provided the bulk antigens to developing country manufacturers to better locally the access to immunisation tools. The company does not regard the GPEI collaboration philanthropic by nature. However, secondly, the most visible part of Sanofi Pasteur's partnership to GPEI have been vaccine donations, which are valued at USD 18 million bringing the total number of donated doses to 120 million. The company's official "no-profit-no-loss" approach is somewhat contradictory with this behaviour. Sanofi Pasteur got the official status of "corporate partner" of GPEI only in 1997, when the company initiated its large scale donation program. This period also coincides with the rise of resistance to pharmaceutical industry due to the lack of access to HIV/AIDS –antivirals in least developed countries.

Thirdly, Sanofi Pasteur's role has been to make the most of its R&D know-how by improving current prevention tools better suitable for developing country use and introduction a new oral polio vaccine. The company is prepared to develop drug formulations according to specific needs and requirements in LDCs. Fourthly, the company shares its expertise on public health matters pro bono with international organisations and governments. Sanofi Pasteur's role in GPEI is to share medical expertise and advise the stakeholders concerning immunisation strategies. Further, the company carries out empirical studies. So, considering Sanofi-Pasteur's engagement

in GPEI, according to Tulder and Zwart's (2006, 192-198) classification, the company's approach to societal affairs can be regarded as active. Active firms address non-profit issues, though within the company's operational interest.

As an outcome of the partnership, Sanofi Pasteur holds no longer belief in long-term donation programs to redress the access challenge but on the contrary, looks for more sustainable win-win strategies and local capacity building in its actions. The GPEI experience has highlighted to Sanofi Pasteur the following bottle-necks to be confronted when improving access to vaccines in LDCs: anticipating the industrial requirements sufficiently ahead of time, matching the demand and developing right combination vaccines. The indirect positive consequences of the company's involvement in polio eradication include the ability to build relationships with the local authorities, markets and consumers in least developed countries. To continue, the emerging economies are gaining in importance within vaccine industry and vaccines are rising in revenues in pharmaceutical industry. GPEI has laid an excellent position and reputation for Sanofi-Aventis to capitalise on when in contact with the local governments. According to this study, no significant risks materialised in the GPEI – Sanofi Pasteur collaboration. The GPEI's challenges in Nigeria, showed that the country of origin of the vaccine manufacturer can have an impact on its eligibility and role in a health access partnership.

To conclude, the GPEI has successfully eliminated poliomyelitis from majority of countries however, the commitment of the stakeholders is vital until a total eradication is achieved. Sanofi-Pasteur stressed its role as firstly,

a vaccine supplier and research-based pharmaceutical industrial and secondly, a specialist in the field, willing to provide its expertise to public health authorities in regards to developing countries. The driving values of Sanofi Pasteur lie rather in the ethical reasoning, social responsibility, future market opportunities, public relations and relationship building, than in short-term maximisation of the return on investment through exploitation of old product portfolio. Next, the company aims to solve current industrial bottle-necks and build mechanisms to measure the impact of PPHPs. These findings are rather identical with the theoretical findings of the literature review. The literature review brought up corporate social responsibility, new market creation, bettering of corporate image through brand management tools, relationship building with the governmental actors and talent retention/recruitment as the principle drivers of private sector partners' in PPHPs. Finally, the traditions oblige Sanofi Pasteur; owing to its history, the firm has been able to acquire an extensive portfolio, know-how and manufacturing capacity of poliomyelitis immunisation tools that have been fundamentally important to GPEI's success. Sanofi Pasteur's diversified, modern role in GPEI is in line with the company's strong commitment to the initiative and an example of the 21st century's partnership.

6.3 Recommendations

This study could have benefited from a wider round of interviews including other GPEI stakeholders and their point of views on private sector's, notably Sanofi Pasteur's role in the initiative. Equally, a multiple-case study construction would have enabled quantitative and comparative analytical

design and strengthened the results. However, in the context of a master's thesis, the research would have gained too large measures.

Businesses that join global health alliances must be prepared for controversial reception due to strong voiced suspicion on the motives of the private sector. Somewhat contradictory, pharmaceuticals are wanted partners in global health initiatives and the options are exuberant. Companies planning to take part in the partnerships are recommended to evaluate their own expectations and core skills, what resources they are willing and able to offer to the partnership. This is primarily to avoid confusion, negative publicity and unnecessary risk-taking. A thoughtful analysis, transparent communication and firm engagement, including the company's top management involvement, pave the way for alliance success. A good match with a suitable PPHP can provide the pharmaceutical all the benefits discussed (see chapter 2.3.2). However, the prior analysis and preparation are the key, which will enable a consistent and committed dedication to the cause and good operational environment for the partnership. This study shows that surely one of the success factors behind the elimination of polio has been the Sanofi Pasteur's commitment and atypically comprehensive and diverse role it has taken in GPEI. Sanofi Pasteur's drivers and role are being presented in detail in chapter 5.2.3.

6.4 Suggestions for further research

The subject of public-private health partnerships being such a complex and recent phenomenon, it offers a wide array of possibilities for further research. The scope of this study being relatively narrow with a focus to

only one PPHP and one corporate partner, a similar research construct would be meaningful to conduct including several PPHPs and corporate partnerships. A larger comparative data would enable quantitative analysis and more tenable conclusions could be drawn from the evidence. Alternatively, any of the sub-chapters of this study would benefit from deepened examination. Furthermore, literature revealed one research gap. PPHPs being a relatively recent concept, more independent research is needed on the efficiency of PPHPs and how the partnerships have benefited the global health landscape. Also, many doubts still arise regarding the possible conflicting interests of private and public actors. Thus, a clear need remains for constructing regulation and guidance on global health partnerships.

Global polio eradication having proven to be a more challenging task than anyone could think of in the 1980's, the GPEI's role and operations have produced numerous reports and documents on its functions. Thus, the initiative's records could offer a treasure trove for researchers. Moreover, as the work for poliomyelitis' eradication continues, new strategic and operational challenges that could be examined in academic research lie ahead. The Bill and Melinda Gates Foundation for example currently tries to assess, in collaboration with the WHO, potential manufacturing and operational capabilities regarding inactivated polio vaccine (IPV) production (Singh 2008). The strategies to provide access to IPV for developing world populations are currently being developed by outside management consulting firms. Resolving the challenges in GPEI offers lessons for other public health challenges.

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Appendix-1

QUESTIONNAIRE FOR INTERVIEW

BACKGROUND

- What is your background/ position in Drug Access at Sanofi-Aventis?
- How long have you been involved with poliomyelitis and the GPEI?

SANOFI-AVENTIS DRUG ACCESS DEPARTMENT

- Why to your opinion Sanofi Aventis has a Drug Access department?
- What was before?
- Do you represent also Sanofi Pasteur (or do they have own structure)?
- Your CEO Mr. Dehecq says in the sustainable development report 2005 : "Nous intensifions nos efforts pour les populations des pays qui n'ont pas un accès satisfaisant aux médicaments ». What does this mean? New strategy? Future plans?

POLIOMYELITIS & ITS TREATMENT

- There is no cure for polio, only preventable vaccine. Why?
- I read "Sanofi-Aventis manufactures the largest quantity and holds the largest portfolio of Polio drugs within the industry" –comments?
- Who are your main competitors in polio? What are their roles? China is investing heavily on vaccines –can it be a competitor?
- What remains to be done in Polio R&D? Do you have any Polio vaccines in your current pipeline? Currently you have 4 single vaccines and 10 combination vaccines. How do they differ?
- What are the biggest challenges in eradicating a disease such as polio from vaccine manufacturers perspective?
- I read WHO reports on the prevalence of the disease (4 countries, Nigeria tripled cases) and given the impression that the disease is almost eradicated, a few countries persist. What is your opinion? Nigeria had rumours about unsafe vaccines –did the rumour exist, where it came?
- What political barriers exist to GPEI? What cultural barriers?
- Consequences of GPEI for the individuals and the society at large?
- This week WHO communicated that you with 12 other pharmas have agreed to stop marketing artemisinin monotherapies due to increased resistance. Similar trouble with polio vaccines? How big market was the monotherapy for you? Commercially difficult question? Who decided?

- Could polio immunisation be reversible?
- Do all DCs still vaccine children against polio? Would eradication take away your market?

SANOFI-AVENTIS AND INDUSTRY INITIATIVES ON POLIO

- What was Aventis (Sanofi) Pasteur's role in GPEI (donations, studies, mOPV-1, support to Pasteur institute, new vaccines)? Why did you join? The initiative started in 1988 but you officially joined only 1997 –why? How did you contribute as there was no Drug Access structure?
- What are your motives to partner GPEI? How explain it to shareholders?
- Has S-A learnt something particular from the polio eradication effort that you will be able to use elsewhere?
- The 2004 Sustainable Development report discusses and lists extensively your actions against polio. In 2005 report, Polio is still mentioned but more in a smaller role. Now it is time for Impact Malaria, TB, Sleeping Sickness, Leishmania, vaccines. Is this correct? What is your strategy in Polio initiatives for future?
- According to GSK's CR report, PPPs are a solution to neglected diseases' R&D and access. Rene Cazetien of S-A says they are not alone an answer. What is your opinion on PPPs role in drug access?

STAKEHOLDERS IN DRUG ACCESS

- How do you keep in touch with other stakeholders in public-private health partnerships (MLOs, governments, foundations, NGOs, industry)?
- Who are the closest / farthermost partners? What are the interactions between the stakeholders?
- How local governments are involved (is access to health products only a financial problem)?